

The Employees' Retirement System for the City of Norfolk

**Actuarial Valuation Report
as of June 30, 2024**

**The Eighty-First
Actuarial Valuation**

Produced by Cheiron

August 2024

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Letter of Transmittal	i
Foreword.....	ii
Section I Board Summary	1
Section II Risk Assessment and Disclosure	13
Section III Assets	24
Section IV Liabilities	31
Section V Contributions.....	37

Appendices

Appendix A Membership Information	41
Appendix B Actuarial Assumptions and Methods.....	46
Appendix C Summary of Plan Provisions.....	53

August 22, 2024

Board of Trustees
Employees' Retirement System
City of Norfolk
Norfolk, Virginia 23510

**Re: *The Employees' Retirement System for the City of Norfolk
Actuarial Valuation as of June 30, 2024***

Dear Members of the Board:

At your request, we have conducted an annual actuarial valuation of the Employees' Retirement System for the City of Norfolk as of June 30, 2024. The results of the valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

The actuarial assumptions used in performing this valuation have been recommended by the actuary and adopted by the Board of Trustees based on the actuary's most recent review of the System's experience completed in May 2022. We believe the assumptions used, in aggregate, reflect our best estimate of anticipated future experience of the System. The results of this report are only applicable to the contribution for the fiscal year ending June 30, 2026, and rely on future plan experience conforming to the underlying assumptions. Future valuation reports may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

The purpose of this report is to present the annual actuarial valuation of the Employees' Retirement System for the City of Norfolk. The report also provides information regarding employer contribution levels.

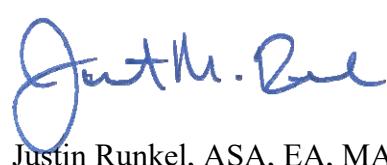
This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This actuarial report was prepared exclusively for the City of Norfolk for the purpose described herein. Other users of this valuation report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any such other users.

Sincerely,
Cheiron



Kevin J. Woodrich, FSA, EA, MAAA
Principal Consulting Actuary



Justin Runkel, ASA, EA, MAAA
Consulting Actuary

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

FOREWORD

Cheiron has performed the actuarial valuation of the Employees' Retirement System for the City of Norfolk as of June 30, 2024. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the System;
- 2) **Indicate trends** in the financial progress of the System;
- 3) **Determine the contribution** to be paid by the City on or around July 1, 2025 for fiscal year June 30, 2026; and
- 4) **Provide specific information** used in preparing the System's financial statement. Additional disclosure information required under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 will be sent under separate cover.

An actuarial valuation establishes and analyzes the System's assets and liabilities on a consistent basis and traces the progress of both from one year to the next. It includes measurement of the System's investment performance as well as an analysis of actuarial liability gains and losses.

Section I presents a summary containing our findings and discloses important trends experienced by the System in recent years.

Section II assesses and discloses various actuarial risk measures of the System.

Section III contains details on asset measures alongside relevant performance measurements.

Section IV shows similar information on System liabilities, measured for actuarial, accounting, and government reporting purposes.

Section V calculates the contribution amount to be paid by the City effective July 1, 2025.

The appendices to this report contain a summary of the System's membership at the valuation date, the actuarial methods and assumptions used in the valuation, and a summary of the major provisions of the System.

In preparing our report, we relied without audit on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23 Data Quality.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION I – BOARD SUMMARY

General Comments

The City Code states that each year the Board must certify to the City Manager the amount of appropriation required for the ensuing year to meet the normal and accrued liability contributions payable by the City. The results of this valuation determine the City contribution amount to be paid for the fiscal year beginning July 1, 2025.

The Actuarially Determined Contribution (ADC) for fiscal year ending June 30, 2026 is \$34,487,000. Since the ADC exceeds the prior fiscal year's contribution of \$34,375,000, the Funding Policy Contribution is also \$34,487,000. As in prior years, it is anticipated that the City will make this contribution around July 1, 2025. The ADC and Funding Policy Contribution were determined without any consideration for the Section 115 Trust.

Forecasts show that should all assumptions be realized, including the 6.75% assumed annual investment return, the System would reach 100% funding by 2033. Included in these projections are the following:

- Projected liabilities and contributions reflect the City's amendment to close the System effective January 1, 2022.
- Projected contributions reflect the City's pension funding policy to contribute the greater of the prior year's contributions (ignoring any amounts from the Section 115 Trust) and the current year's actuarially determined contribution. This funding policy will continue until the System is fully funded. Upon being fully funded, we have assumed that contributions are equal to the actuarially determined contribution. Should the System attain fully funded status, the City may want to consider implementing a funding policy where the minimum contribution is equal to the value of the additional benefits being earned by actives for one more year of service plus administrative expenses.
- The projections also reflect the continued annual payments of \$8.7 million from the Section 115 Trust held outside the System's assets.

Recent Experience

The financial markets performed better than expected during the fiscal year ending June 30, 2024. The actual return on a market value basis was approximately 9.95%. However, the System experienced a small loss on the actuarial value of assets due to continued recognition of net investment losses from prior years. On an actuarial value basis, the assets returned 6.43% compared with an assumed rate of return of 6.75%. The loss recognized for funding purposes was \$4.1 million.

On the liability side, the System's experience resulted in an actuarial loss of \$8.3 million, which represents roughly 0.54% of the prior year's liabilities. This liability loss was primarily due to salaries increasing more than assumed.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION I – BOARD SUMMARY

Despite the combination of asset and liability losses, there was a slight increase in the System's funded ratio (actuarial value of assets over actuarial liability) from 84.5% as of June 30, 2023 to 85.1% as of June 30, 2024.

Effective fiscal year ending June 30, 2023, the City of Norfolk began making separate contributions to the System from the Section 115 Trust that was previously established upon the bond issuance from June 2021. The City has contributed an additional \$8.7 million since the Trust was established and anticipates making a similar contribution annually until the Section 115 Trust assets have been depleted. As of June 30, 2024, the Trust held \$70.7 million in assets. If the entire Trust balance had been contributed on June 30, 2024 and recognized as part of System's assets, the System would be 89.7% funded based on the Actuarial Value of Assets and 89.2% funded based on the Market Value of Assets.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

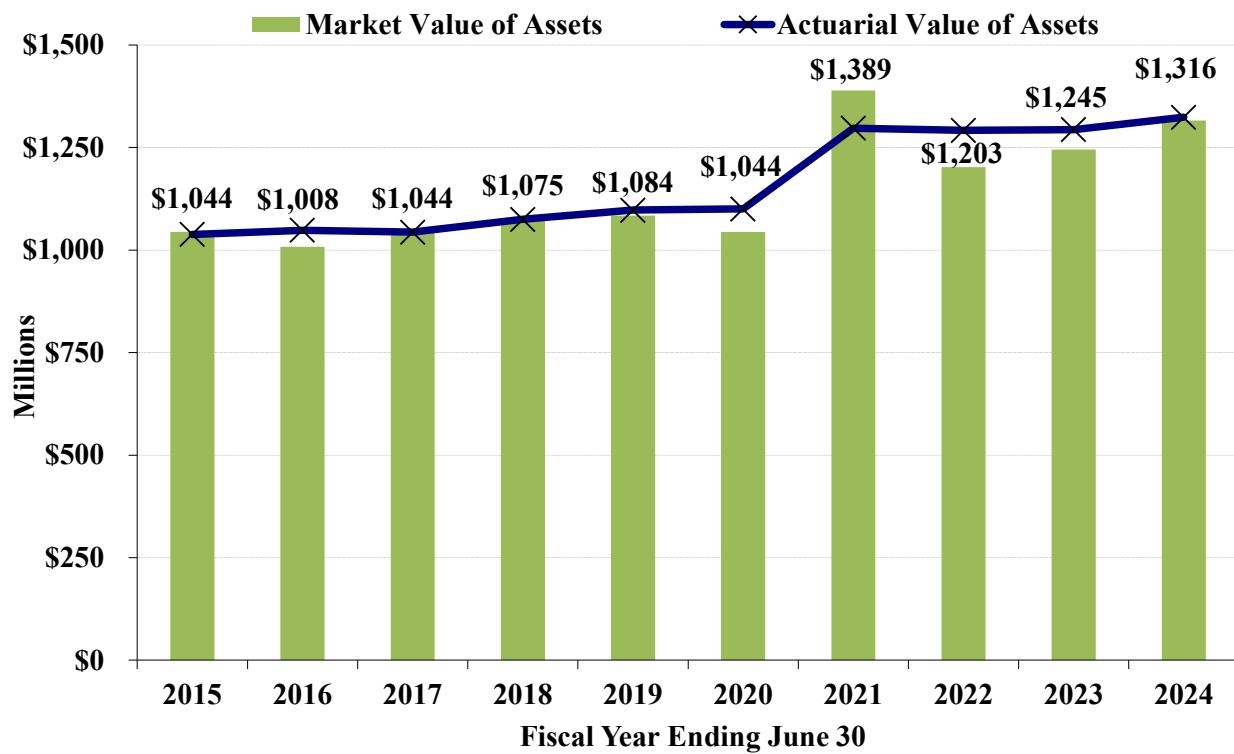
SECTION I – BOARD SUMMARY

Trends

It is important to take a step back from the latest results and view them in the context of the System's recent history. Here we present a series of graphs that display key factors in the valuations over the last ten years.

Growth in Assets

The following graph shows the progression of the Market Value of Assets (MVA) and Actuarial Value of Assets (AVA) over the most recent 10-year period.



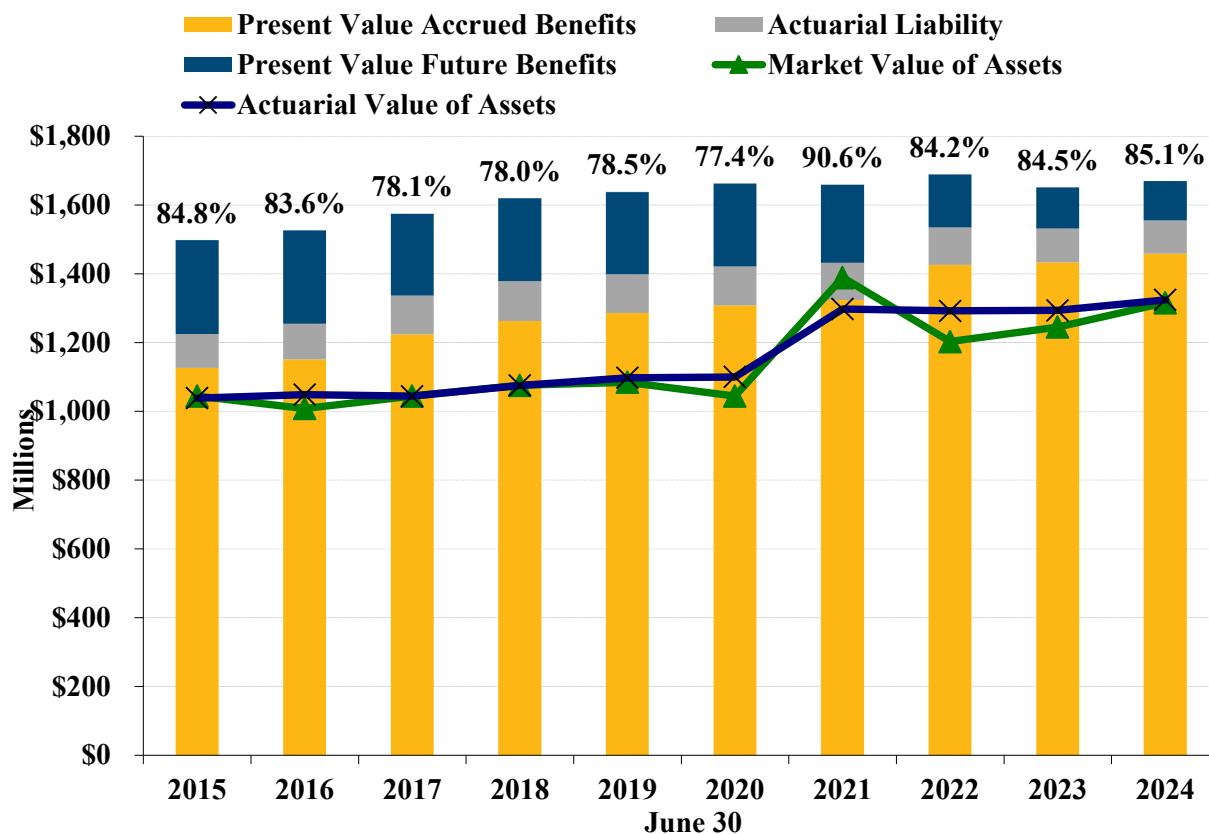
The MVA experienced a return of 9.95% this year. The AVA increased by a relatively smaller amount due to the smoothing method in place, which recognizes historical gains and losses that have been deferred. The return on the AVA was 6.43%, which is slightly less than the 6.75% assumed rate of return from the prior year. The MVA is currently \$8.2 million less than the AVA. This amount represents the stored net investment loss that will be recognized in the near term and would offset the impact of future investment gains for the System.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Assets and Liabilities

The following graph shows a comparison of different asset and liability measurements over the most recent 10-year period.



The bars represent the three different measures of liability mentioned in this report. For funding purposes, the target amount is the Actuarial Liability, represented by the top of the gray bar. We compare the Actuarial Value of Assets to this measure of liability in developing the funded ratio. The funded ratio is represented by the percentages shown above each bar.

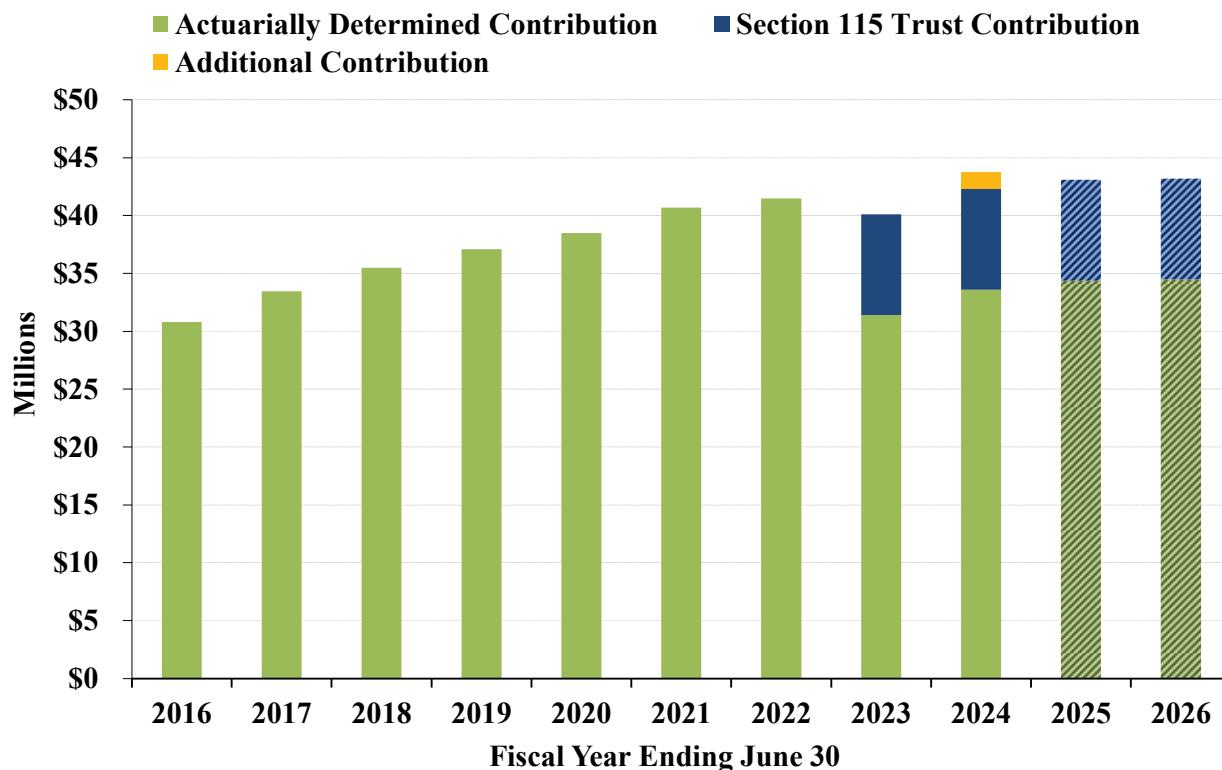
The amount represented by the top of the blue bars, the Present Value of Future Benefits, is the amount needed to provide all benefits for the current participants and their beneficiaries. The top of the gold bars measures the Present Value of Accrued Benefits, which is the liability attributable to benefits earned to date.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Contributions

The following graph shows the recent history of City contributions as well as the expected City contributions for the next two fiscal years.



The green bars in this graph show the City's actuarially determined contribution and depict the actual contribution amounts that have been paid. The textured bars shown for fiscal years ending June 30, 2025 and 2026 are expected amounts as determined by the June 30, 2023 and June 30, 2024 actuarial valuations, respectively. Beginning in fiscal year ending 2023, the blue bars depict Section 115 Trust contributions made to the System. Contributions paid from the Trust are assumed to be \$8.7 million annually until depletion of the Trust, which had a balance of \$70.7 million as of June 30, 2024. The gold bar reflects the City's \$1.5 million additional contribution to the System in July 2023 to fully cover the additional liability attributable to the one-time supplement paid to eligible retirees in July 2023.

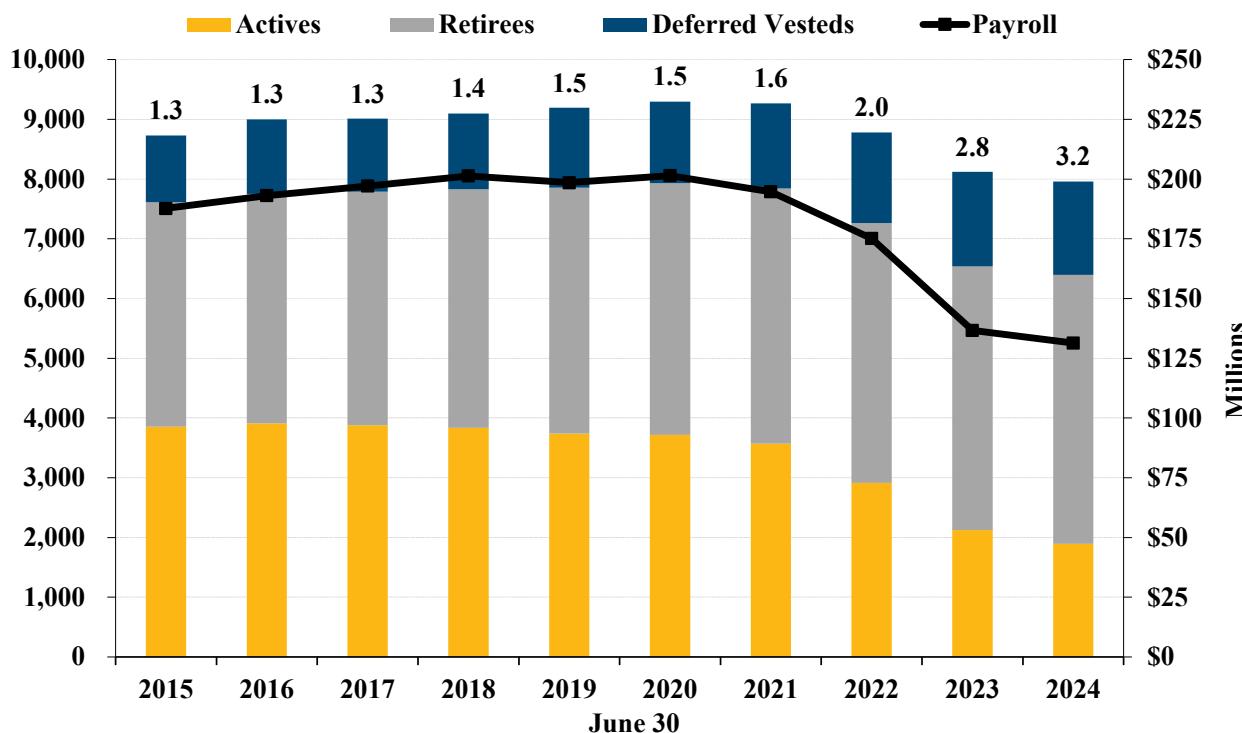
City contributions are determined by the actuarial process that features an explicit lag. For example, the June 30, 2024 valuation determined the annual required contribution for fiscal year ending June 30, 2026, which will be made on or around July 1, 2025. The small increase in the City's actuarially determined contribution from FYE 2025 to FYE 2026 is attributable to the actuarial loss.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Participant Trends

The following graph shows participation in the System over the most recent 10-year period.



The black line shows covered payroll for active members participating in the System (right-hand scale). As with any maturing pension plan, the number of retirees has increased, whereas the number of actives has declined. This trend is expected to accelerate due to closing the plan to new hires effective January 1, 2022. In addition to closing the plan, the sharp decline in active membership and payroll in recent periods is also attributable to the departure of active members that elected to port to the Virginia Retirement System (VRS).

The numbers above the bars on the graph indicate the “support ratio” – the ratio of inactive participants to active participants. When higher contributions are required to meet funding shortfalls caused by poor investment performance, the leveraging impact of a higher support ratio becomes significant. This is due to the imbalanced impact of investment shortfalls, which impacts total assets (i.e., impacting both participating actives and inactives), versus contributions that are only made on behalf of the System’s active participants. This support ratio has increased over the past ten years and is expected to increase in the future as the System continues to mature without replenishing the active population with new hires. In Section II of this report, we compare Norfolk’s support ratio to other public plans.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION I – BOARD SUMMARY

Baseline Projections

Our analysis of the projected financial trends for the System is an important part of this valuation. In this section we project future valuation results, focusing on the previously referenced funded ratio (actuarial value basis) and the expected City contributions. We present a baseline scenario based on all actuarial assumptions being met exactly as assumed during the projection period, including the 6.75% investment return assumption. In the risk section of the report (Section II), we demonstrate how sensitive future valuation results are to deviations in actual returns from the assumed investment returns by presenting similar results with investment returns deviating from those assumed.

Effective January 1, 2022, the System was closed to new hires. New City employees are required to join the Virginia Retirement System (VRS).

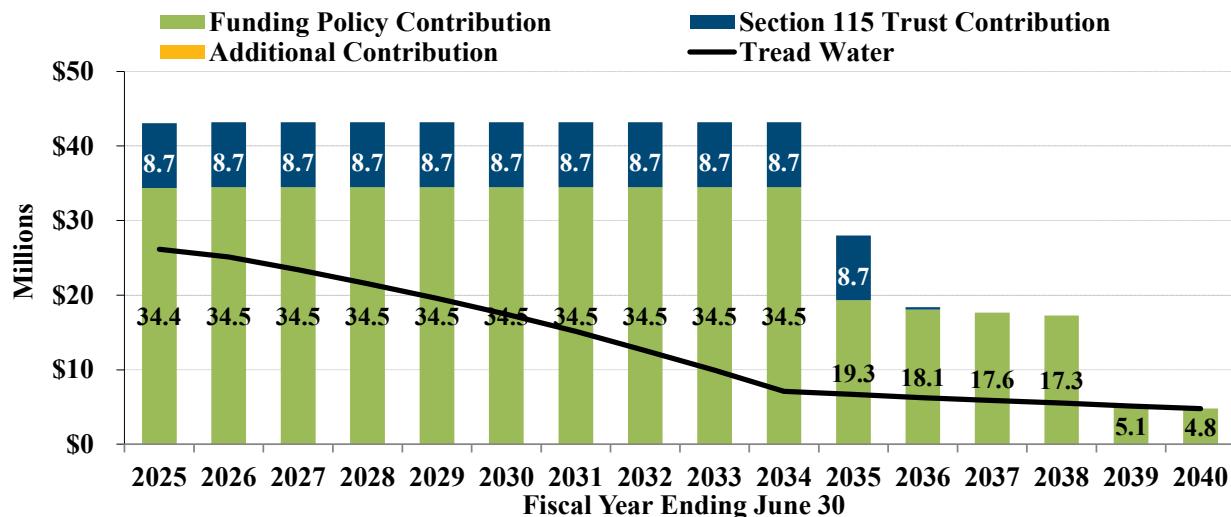
Finally, the projections assume the City's contributions will be made in accordance with the funding policy. Funding policy contributions are greater of the prior year's contributions and the current year's actuarially determined contribution amount. This policy will continue until the System is fully funded. Upon being fully funded, we have assumed that contributions are based on the projected actuarially determined contribution. As the System attains fully funded status, the City may want to consider changing its funding policy to contribute no less than the amount to cover the normal cost, the value of additional benefits being earned by active members for a year of service and assumed administrative expenses.

In addition to the City's annual contribution to satisfy the funding policy, projected contributions include an assumed \$8.7 million annual contribution from the Section 115 Trust each July until those assets have been depleted.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

The following two graphs below show the expected progress of the System over the next 15 years.



The preceding graph shows that the City's contribution amount (green bars) is projected to remain level at \$34.5 million for several years in accordance with the funding policy. When the System is projected to reach fully funded, the minimum contribution requirement from the funding policy is lifted, and the City contribution is equal to the actuarially determined contribution. Full funding is expected in the June 30, 2033 valuation, which first impacts the fiscal year ending June 30, 2035 contribution. Future City contributions are assumed to be made at the beginning of each fiscal year, on or around July 1.

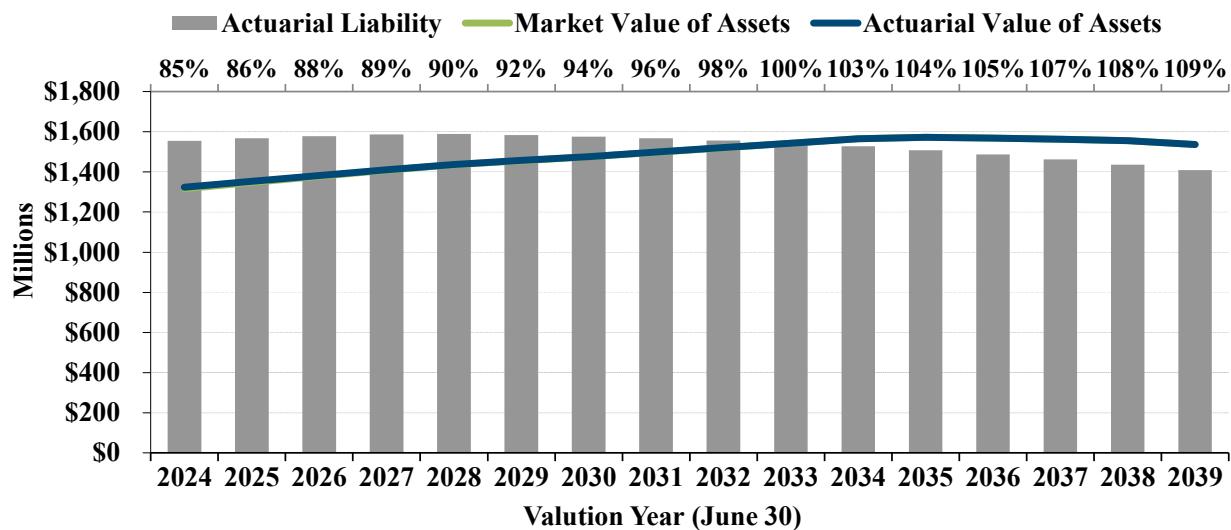
The System is projected to receive \$8.7 million annually (blue bars) from the Section 115 Trust until those assets are depleted in 2036.

The black line is the “tread water” line, which is the sum of the normal cost, administrative expenses, and interest on the unfunded actuarial liabilities (UAL). The tread water line shows the minimum contributions needed to avoid an increase in the UAL. With contributions anticipated to exceed the tread water amount, the unfunded liabilities quickly decline, and the plan reaches full funding in 2033.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION I – BOARD SUMMARY

The following graph shows the projected funding status over the next 15 years. The System's funded ratio is projected to improve to 109% by the end of the period shown as contributions pay down the existing unfunded liability.



THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Table I-1
Summary of Principal Plan Results
Combined
(\$ in Thousands)

	June 30, 2023	June 30, 2024	% Change
<u>Participant Counts</u>			
Actives	2,121	1,891	(10.8%)
Leave of Absence ¹	13	10	(23.1%)
Terminated Vested Members	1,583	1,563	(1.3%)
Participants Due Account Balance	386	9	(97.7%)
In Pay Status Participants	4,416	4,502	1.9%
DROP Participants	<u>108</u>	<u>128</u>	18.5%
Total	8,627	8,103	(6.1%)
Annual Salaries of Active Members ²	\$ 136,645	\$ 131,380	(3.9%)
Annual Retirement Allowances ³	102,356	104,723	2.3%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 1,530,754	\$ 1,554,843	1.6%
Assets for Valuation Purposes (AVA)	<u>1,293,562</u>	<u>1,323,882</u>	2.3%
Unfunded Actuarial Liability [AL - AVA]	\$ 237,192	\$ 230,961	
Funding Ratio (AVA ÷ AL)	84.50%	85.15%	
Funding Ratio (MVA ÷ AL)	81.33%	84.62%	
Present Value of Accrued Benefits	\$ 1,433,359	\$ 1,457,796	1.7%
Market Value of Assets (MVA)	<u>1,244,910</u>	<u>1,315,719</u>	5.7%
Unfunded Accrued Benefit Liability	\$ 188,449	\$ 142,077	
Accrued Benefit Funding Ratio	86.85%	90.25%	
<u>City Contributions</u>			
Normal Cost Contribution	\$ 9,718	\$ 9,477	(2.5%)
Unfunded Actuarial Liability Contribution	23,524	23,877	1.5%
Administrative Expense Contribution	<u>1,133</u>	<u>1,133</u>	0.0%
Total Contribution	\$ 34,375	\$ 34,487	0.3%
	Fiscal Year 2025	Fiscal Year 2026	

¹ 13 and 10 participants on Leave of Absence as of June 30, 2023 and June 30, 2024, respectively, are entitled to a vested benefit.

² Excludes salaries earned by DROP participants.

³ Includes the monthly benefit amounts for the DROP participants. For those in the DROP period, the amount shown is 70% of the full monthly benefit.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Table I-2
Summary of Principal Plan Results
General Employees
(\$ in Thousands)

	June 30, 2023	June 30, 2024	% Change
<u>Participant Counts</u>			
Actives	1,417	1,238	(12.6%)
Leave of Absence ¹	7	7	0.0%
Terminated Vested Members	1,171	1,151	(1.7%)
Participants Due Account Balance	319	7	(97.8%)
In Pay Status Participants	2,981	3,043	2.1%
DROP Participants	63	77	22.2%
Total	5,958	5,523	(7.3%)
Annual Salaries of Active Members ²	\$ 86,178	\$ 81,923	(4.9%)
Annual Retirement Allowances ³	54,853	55,888	1.9%
<u>Assets and Liabilities</u>			
Actuarial Liability (AL)	\$ 779,424	\$ 787,453	1.0%
Assets for Valuation Purposes (AVA)	680,405	689,775	1.4%
Unfunded Actuarial Liability [AL - AVA]	\$ 99,019	\$ 97,678	
Funding Ratio (AVA ÷ AL)	87.30%	87.60%	
Funding Ratio (MVA ÷ AL)	84.01%	87.06%	
Present Value of Accrued Benefits	\$ 733,203	\$ 740,783	1.0%
Market Value of Assets (MVA)	654,815	685,523	4.7%
Unfunded Accrued Benefit Liability	\$ 78,388	\$ 55,260	
Accrued Benefit Funding Ratio	89.31%	92.54%	
<u>City Contributions</u>			
Normal Cost Contribution	\$ 3,376	\$ 3,184	(5.7%)
Unfunded Actuarial Liability Contribution	9,911	10,195	2.9%
Administrative Expense Contribution	715	706	(1.3%)
Total Contribution	\$ 14,002	\$ 14,085	0.6%

¹ 7 and 7 participants on Leave of Absence as of June 30, 2023 and June 30, 2024, respectively, are entitled to a vested benefit.

² Excludes salaries earned by DROP participants.

³ Includes the monthly benefit amounts for the DROP participants. For those in the DROP period, the amount shown is 70% of the full monthly benefit.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION I – BOARD SUMMARY

Table I-3
Summary of Principal Plan Results
Public Safety
(\$ in Thousands)

	June 30, 2023	June 30, 2024	% Change
Participant Counts			
Actives	704	653	(7.2%)
Leave of Absence ¹	6	3	(50.0%)
Terminated Vested Members	412	412	0.0%
Participants Due Account Balance	67	2	(97.0%)
In Pay Status Participants	1,435	1,459	1.7%
DROP Participants	45	51	13.3%
Total	2,669	2,580	(3.3%)
Annual Salaries of Active Members ²	\$ 50,467	\$ 49,457	(2.0%)
Annual Retirement Allowances ³	47,503	48,835	2.8%
Assets and Liabilities			
Actuarial Liability (AL)	\$ 751,330	\$ 767,390	2.1%
Assets for Valuation Purposes (AVA)	613,157	634,107	3.4%
Unfunded Actuarial Liability [AL - AVA]	\$ 138,173	\$ 133,283	
Funding Ratio (AVA ÷ AL)	81.61%	82.63%	
Funding Ratio (MVA ÷ AL)	78.54%	82.12%	
Present Value of Accrued Benefits	\$ 700,156	\$ 717,013	2.4%
Market Value of Assets (MVA)	590,095	630,196	6.8%
Unfunded Accrued Benefit Liability	\$ 110,061	\$ 86,817	
Accrued Benefit Funding Ratio	84.28%	87.89%	
City Contributions			
Normal Cost Contribution	\$ 6,342	\$ 6,293	(0.8%)
Unfunded Actuarial Liability Contribution	13,613	13,682	0.5%
Administrative Expense Contribution	418	427	2.2%
Total Contribution	\$ 20,373	\$ 20,402	0.1%
	Fiscal Year 2025	Fiscal Year 2026	

¹ 6 and 3 participants on Leave of Absence as of June 30, 2023 and June 30, 2024, respectively, are entitled to a vested benefit.

² Excludes salaries earned by DROP participants.

³ Includes the monthly benefit amounts for the DROP participants. For those in the DROP period, the amount shown is 70% of the full monthly benefit.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Introduction

Actuarial Standard of Practice (ASOP) No. 51 was published by the Actuarial Standards Board to provide guidance to actuaries on the assessment and disclosure of risks related to the possibility that future pension plan experience will deviate from assumptions. This standard does not introduce new concepts to actuarial work; it simply attempts to provide some codification of the practice. Our reports have routinely included stress testing of the valuation results showing the impact of future experience deviating from the underlying assumptions as well as other communications related to the risks that the actual condition of the System will deviate from our valuation results. However, this section of the report consolidates the information regarding assessment and disclosure of the System's risks and adds several additional items helping to communicate and understand these risks.

The System's actuarial valuation results are dependent on assumptions about future economic and demographic experience. Based on actuarial standards of practice, the assumptions represent a reasonable estimate for future experience. However, actual future experience will never conform exactly to the assumptions and may differ significantly from the assumptions. This deviation is the risk that pension plan sponsors undertake in relying on a pension plan's actuarial valuation results.

This section of this report is intended to identify the primary drivers of these risks, provide background information and assessments about these identified risks, and communicate the significance of these risks to this Program.

Identification of Risks

For this System, the three primary valuation results that can significantly differ from those expected are in the assets, liabilities, and employer contributions. While there are several factors that could lead to these results being different, we believe the primary risks for this System are:

- Investment risk,
- Longevity and other demographic risks,
- Assumption change risk, and
- Plan change risk.

Other risks that we have not identified may also turn out to be significant.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Investment Risk is the potential for investment returns to deviate from what is expected. When actual investment returns are lower than the investment assumption used in the actuarial valuation (currently assume 6.75% per year), the unfunded liability will increase and will require higher contributions than otherwise anticipated. But, when actual returns exceed the assumption, the resulting unfunded liability measurements and actuarially determined contributions will be lower than anticipated. As seen in the historical section that follows, this has been a significant driver of deviations in the actual measurements for this System from those expected by the valuations.

Longevity and Other Demographic Risk is the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time as the actual experience deviates from expected. In addition, the extensive number of assumptions related to longevity and demographic experience often result in offsetting factors contributing to the System's overall liability experience. As such, these risks are often dwarfed by other risks, particularly those due to investment returns. The historical section shows that the System has experienced liability gains in nine of the last ten years. However, the amounts of these liability gains are small in many years, especially when compared to investment return experience. This year, the System experienced a liability loss of \$8.3 million and an actuarial investment loss of \$4.1 million.

Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates over time may result in a change in the assumed rates of return used in the valuation. A healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. Assumption change risk is an extension of the risks previously identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in the environment when the current assumption is no longer reasonable. The historical review section illustrates that assumption change risk has had a measurable impact in 2022 when the underlying assumptions were changed as a result of an experience study. The reduction in the discount rate assumption from 7.00% to 6.75% was particularly impactful, increasing liabilities by 2.6%.

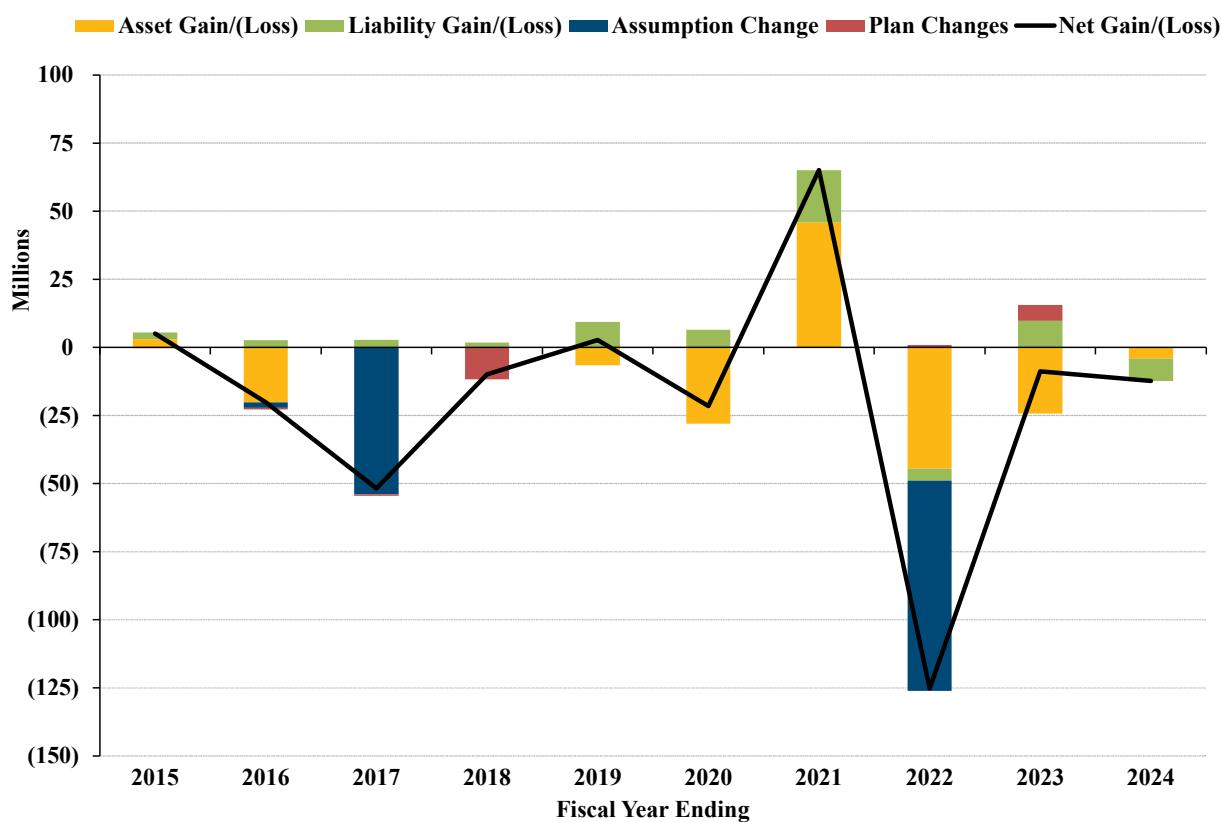
Plan Change Risk is the potential for the provisions of the System to be changed such that the funding or benefits are changed materially. In addition to the actual payments to and from the System being changed, future valuation measurements can also be impacted, with System changes leading to deviations between actual future measurements and those expected by the current valuation. A recent example was the System's closure to new hires effective January 1, 2022. While this change is particularly impactful on the System's long-term funding, the immediate impact of these plan changes on the City's contribution is relatively small and will be slowly realized over time. The historical review section will show that plan change risk has resulted in deviations in the actual measurements for this System from those expected by the valuations.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Historical Experience Deviations

In understanding the impact of some of these risks, it is useful to look at past experience deviations. These deviations are commonly referred to as actuarial gains and losses. The following graph shows the gains/(losses) at each valuation date between the actual and expected experience broken down by cause. As described previously and is evident in this graph, assumption changes, asset gains/(losses) and liability gains/(losses) have been the most significant risks for the System.



**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Plan Maturity Measures

As pension plans become more mature, the primary risks of adverse investments, demographic deviations, plan changes, and assumption change experience become of more significant concern. As a result, it has become increasingly important to examine measures that indicate a pension plan's maturity level. With shrinking workforces, aging Baby Boomers, and retirees living longer, plans pay out more in benefits than they receive in contributions – leading to negative cash flows.

When plans with negative cash flows suffer investment losses, they need to liquidate enough assets to pay for benefits and expenses that exceed contributions. That means these plans will need to earn higher returns to rebuild their assets to the previous levels. Plans with negative cash flows exceeding five percent of assets are especially vulnerable to asset losses.

The balance of this section discloses and examines two maturity measures: the support ratio and the net cash flow ratio.

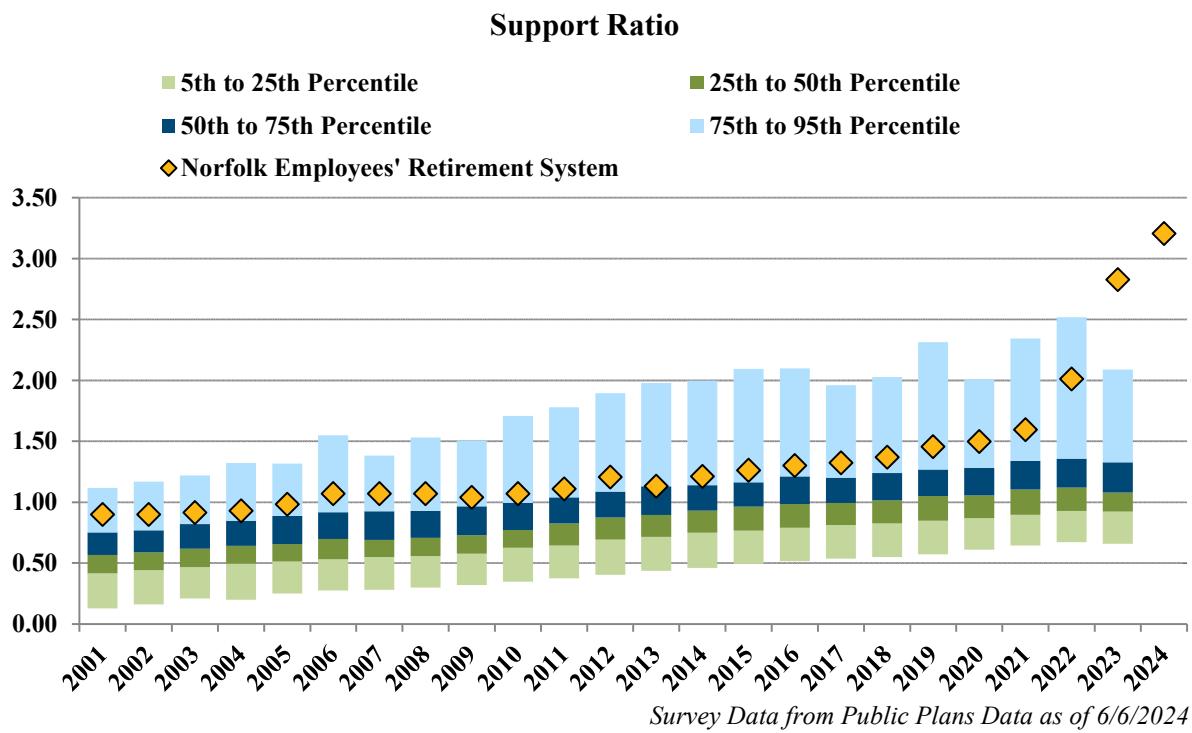
THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Support Ratio

A commonly used measure of plan maturity is the support ratio, which is the ratio of inactive members (participants currently receiving benefits or entitled to a future benefit) to the number of active members. The greater this ratio, the more likely that the plan will have or develop negative cash flows.

The following graph shows the support ratio over time for the System compared to the Public Plan database.



The orange diamonds in this graph show that the System's support ratio for each year has generally increased over time and has remained above the 75th percentile level over the entire period. This trend indicates that the System was maturing at a similar rate as other plans through 2021. With the City closing the plan effective January 1, 2022 and allowing active members to leave for VRS, the support ratio has increased more rapidly, reaching 3.2 as of June 30, 2024.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

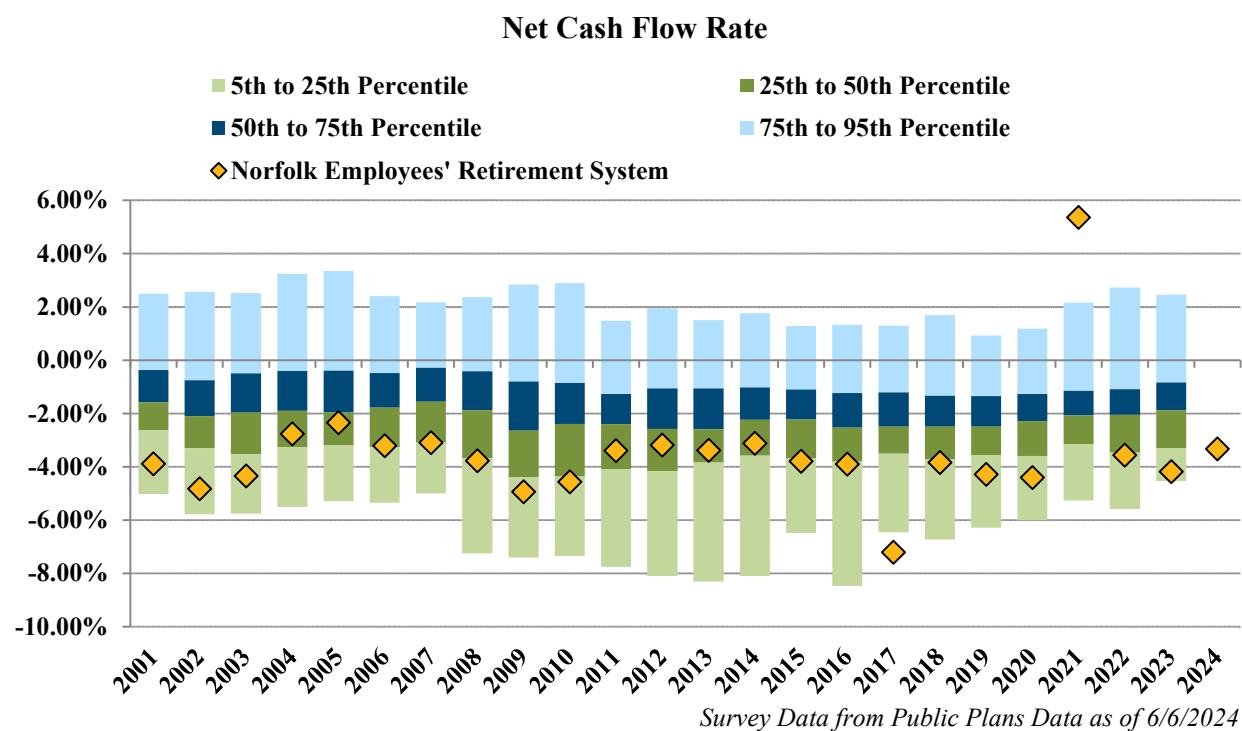
SECTION II – RISK ASSESSMENT AND DISCLOSURE

Net Cash Flow Rate

Another measure of plan maturity is the ratio of net cash flow – contributions less benefits and expenses – to the market value of plan assets. When this ratio is significantly negative, a plan is very vulnerable to market declines.

The following chart shows that the System's net cash flow rate has remained relatively stable over the last several years. The large negative percentage in 2017 was a result of the City changing how it reflects contributions in its financials. The large positive percentage in 2021 is attributable to the inclusion of the City's one-time \$119.6 million contribution from pension obligation bonds.

Disregarding these outlier years, the System has had consistently more negative cash flows than the median plan in the public plan database. This measure again provides some indication that this System is more mature than the typical public plan.



**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Assessing Future Risk

Assessing the future risk that the expected measurements produced by the actuarial valuations will deviate from the actual values over time is complex and can never be exactly known.

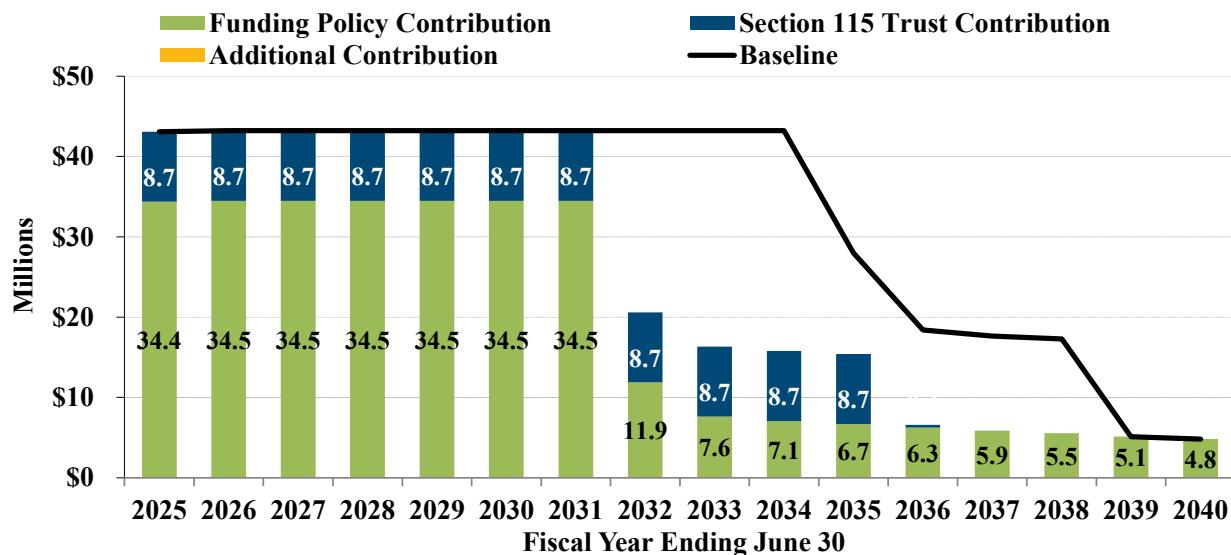
The Board Summary has additional detail on the baseline projection. It is important to note that baseline projections, while valid, **are not going to occur** as experience never conforms exactly to assumptions every year. On the following pages, we have included scenarios that illustrate what may happen if investment returns are consistently 2% higher or lower than assumed. We have also shown a scenario using historical market returns that averaged nearly 6.75% but with heavy volatility. As plans mature, it becomes more difficult to recover from market declines even when the average investment return over a long period is equal to the expected return.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

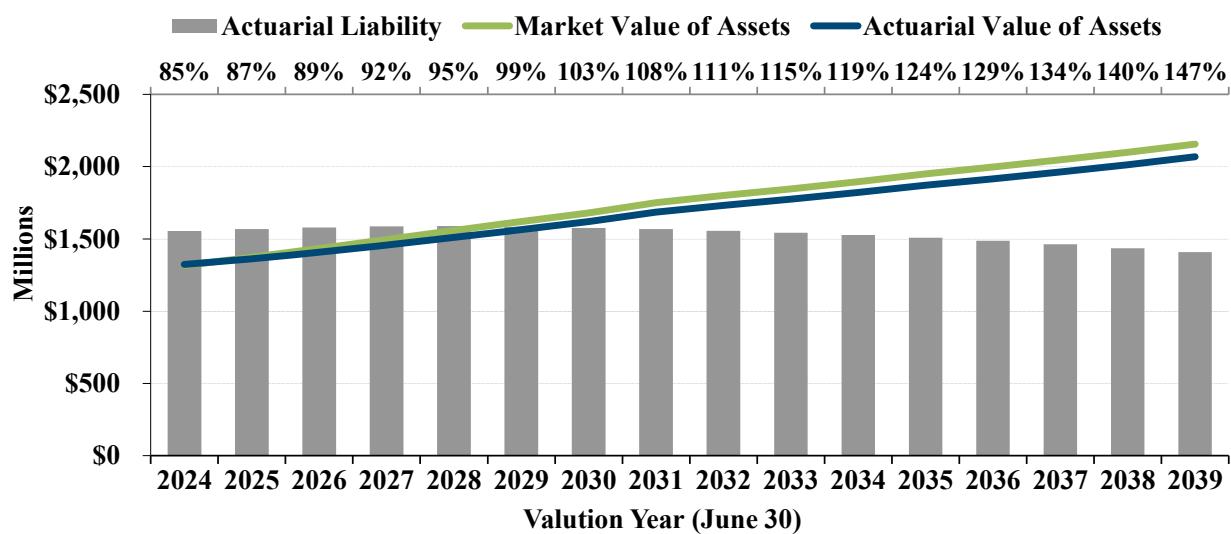
SECTION II – RISK ASSESSMENT AND DISCLOSURE

Projections with Asset Returns of 8.75%

The following charts show what the next 15 years would look like with an 8.75% annual return.



In this scenario, the funding policy contribution amount would decrease to the ADC three years earlier than the baseline scenario. Excess contributions from the Section 115 Trust and the funding policy push the System into a surplus position by June 30, 2030 as shown in the graph below. The amortization of this growing surplus eventually exceeds the cost of new accruals and expenses. If the System were to attain fully funded status, the City may want to consider a contribution of no less than the annual amount needed to cover the normal cost (new accruals) and administrative expenses. This is what was modeled above.

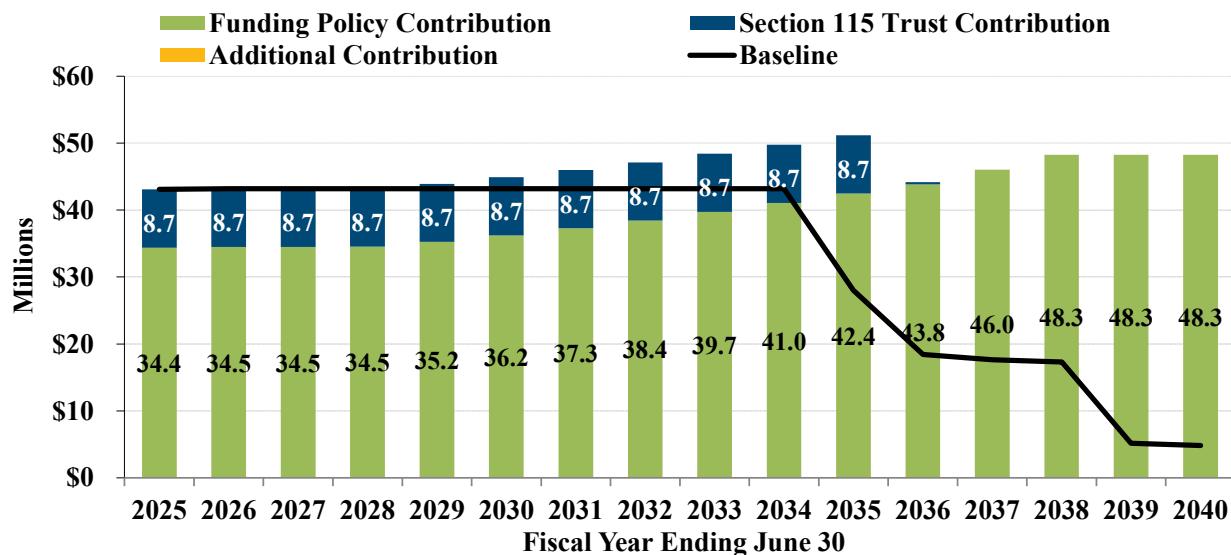


THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

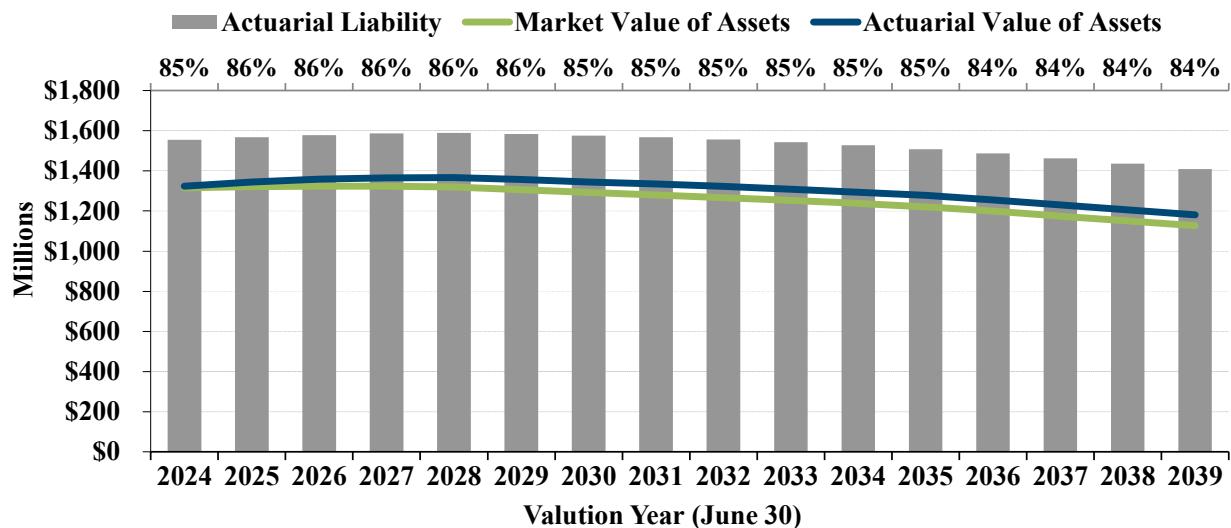
SECTION II – RISK ASSESSMENT AND DISCLOSURE

Projections with Asset Returns of 4.75%

The following charts show what the next 15 years would look like with a 4.75% annual return.



With assets projected to underperform the assumed 6.75% every year, the funding policy contribution would increase steadily through the 15-year period.



The System's funded level would ultimately decrease to 84%. While this is only a 1% decrease from the current 85% funded status, the City would be contributing at a much higher level over this period to compensate for the lack of investment earnings. These projections are absent from any additional ad hoc COLAs.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION II – RISK ASSESSMENT AND DISCLOSURE

Projections with Volatile Asset Returns

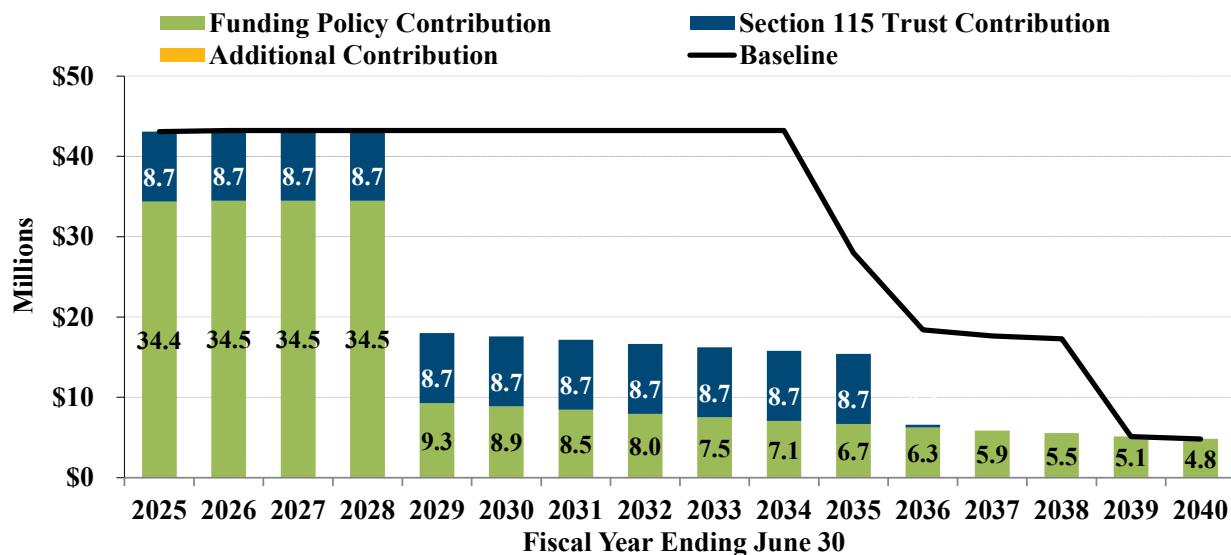
Like the baseline projection, the two projections in this section assumed a fixed return of 8.75% or 4.75% every year. While unlikely to occur, these scenarios provide perspective on the sensitivity of the funded status and City's contribution should asset returns routinely exceed or fall short of the assumed 6.75%.

The actual investment performance of the System is likely to be more volatile. The last projection shown below varies the returns for the next 15 years to mirror actual returns from calendar years 1996 to 2010 based on a portfolio invested in 60% equities and 40% fixed income, averaging 6.76% over the next 15 years, just above the current assumed return of 6.75%. The rates assumed for this scenario are shown in the following table.

FYE June 30,	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Return	17.63%	24.06%	22.34%	14.91%	6.17%	(4.41%)	(7.34%)	4.31%	11.60%	6.51%
FYE June 30,	2035	2036	2037	2038	2039					
Return	4.86%	14.80%	(5.02%)	(13.31%)	12.46%					

Despite averaging 6.76%, this scenario illustrates the impact of timing of returns. With double-digit returns in the first four years, the System reaches 100% funded in 2027, six years earlier than the baseline. In doing so, the System develops a big enough surplus that the impact of lower returns in subsequent years is effectively mitigated.

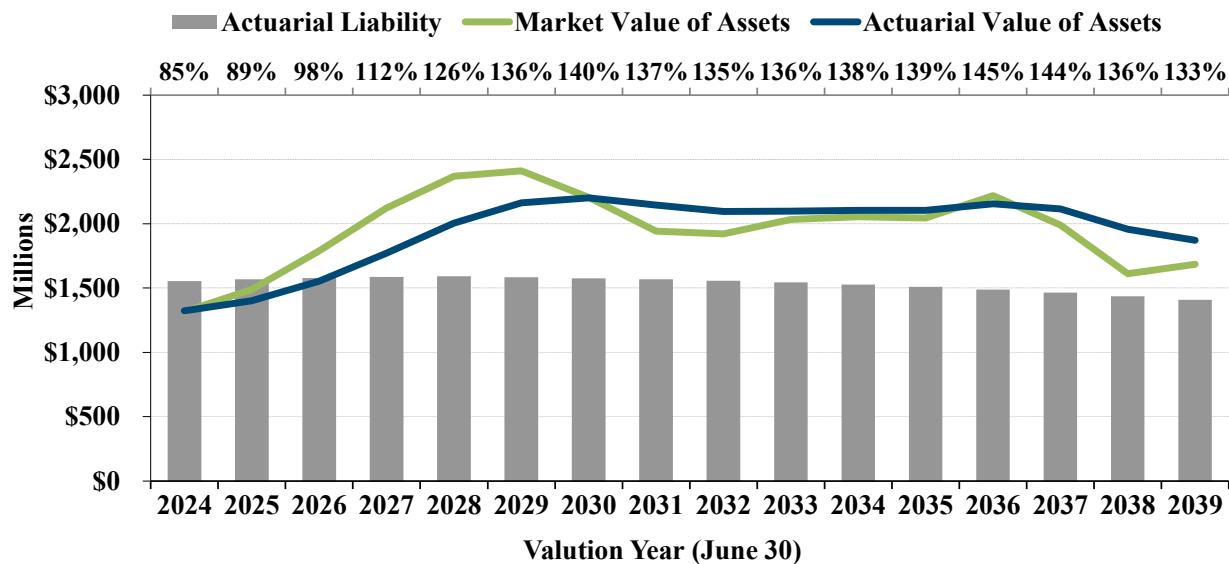
Note that this chart reflects an illustrative scenario and is not intended to reflect future expectations.



THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION II – RISK ASSESSMENT AND DISCLOSURE

The funded ratio of the System is also more volatile with varied returns as seen in the following graph from this one illustrative scenario.



Assessing a Low-Risk Investment Strategy

The System invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. The lowest risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows match the benefit cash flows of the System. Such a portfolio, however, would have a lower expected rate of return than a diversified portfolio. The Low-Default-Risk Obligation Measure (LDROM) represents what the funding liability would be if the System invested its assets in such a portfolio.

As of June 30, 2024, we estimate that such a portfolio would have an effective expected return of 5.31%¹ compared to the Plan's discount rate of 6.75%, and the resulting LDROM would be \$1.98 billion compared to the Actuarial Liability of \$1.55 billion. This \$0.43 billion difference represents the value of bearing the risk of investing in the diversified portfolio. Alternatively, it can be seen as the cost of eliminating the investment risk.

Benefit security for members of the System relies on a combination of the assets in the System, the investment returns generated on those assets, and the promise of future contributions. If the System were to invest in the LDROM portfolio, the reported funded status would decrease. However, it would not change the amount of assets currently in the System but would reduce expected future returns on assets. Such an investment strategy would also reduce the expected volatility of future returns.

¹ Based on the June 30, 2024 FTSE Pension Discount Curve and all other assumptions and methods as used to calculate the Actuarial Liability

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION III – ASSETS

Pension plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, City contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on System assets including:

- **Disclosure** of system assets at June 30, 2023 and June 30, 2024;
- Statement of the **changes** in market values during the year;
- Development of the **actuarial value of assets**;
- An assessment of **investment performance**; and
- A projection of the System's expected **cash flows** for the next ten years.

Disclosure

The market value of assets represents “snap-shot” or “cash-out” values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not suitable for long-range planning.

The actuarial value, or “carrying value,” is the market value that has been smoothed based on actuarial methods used to estimate the long-term asset value. It is used for evaluating the System's ongoing liability to meet its obligations.

Current methods employed by this System determine the actuarial value of assets by first calculating the expected actuarial value of assets based on last year's valuation interest rate, last year's actuarial value of assets, and the net cash flow (contributions less benefit payments and assumed administrative expenses) of the System over the year prior to the valuation. One-third of the difference between the market value of assets and the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets.

The actuarial value of assets is then allocated between the General Employees' portion of the System and that covering Public Safety. The allocation is performed annually based on the actual contribution and benefit payments made on behalf of each type of employee. The investment returns for the year are allocated based on the starting balance and the cash flow of each portion of the fund.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION III – ASSETS

Table III-1
Statement of Assets at Market Value
(\$ in Thousands)

	June 30, 2023	June 30, 2024
Assets		
Cash and Short-Term Investments	\$ 4,369	\$ 2,527
Receivables		
Accrued Investment Income	\$ 584	\$ 559
Accounts Receivable	3	0
Due from Broker for Securities Sold	0	0
Total Receivables	<u>\$ 587</u>	<u>\$ 559</u>
Investments, at Fair Value		
Equity Securities	\$ 0	\$ 4,590
Commingled Funds		
Equity	\$ 739,240	\$ 843,573
Fixed Income	350,878	302,294
Real Estate	90,644	102,502
Hedge Funds	<u>64,443</u>	<u>63,668</u>
Total Commingled Funds	<u>\$ 1,245,205</u>	<u>\$ 1,312,037</u>
Total Investments	\$ 1,245,205	\$ 1,316,627
Total Assets	\$ 1,250,161	\$ 1,319,713
Liabilities		
Accounts Payable	\$ 5,251	\$ 3,994
Due to Broker for Securities Purchased	0	0
Total Liabilities	<u>\$ 5,251</u>	<u>\$ 3,994</u>
Net Assets Available for Benefits	\$ 1,244,910	\$ 1,315,719

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION III – ASSETS

Table III-2
Changes in Market Value of Assets
(\$ in Thousands)

Value of Assets at June 30, 2023	\$	1,244,910
<u>Additions</u>		
Contributions		
Employer Contributions ¹	\$	42,319
Employee Contributions / Purchased Service		8,587
Total Contributions	\$	50,906
Investment Income		
Net Appreciation (Depreciation)	\$	113,757
Interest		218
Dividends		5,884
Other		5,313
Total Investment Income	\$	125,172
Investment Expenses		
Other Expenses (Transfers In/Out)		(1,989)
Net Income from Investing Activities	\$	10
Net Income from Investing Activities	\$	123,193
Total Additions	\$	174,099
<u>Deductions</u>		
Benefits Paid directly to Participants	\$	(94,478)
Return of Contributions		(935)
Beneficiary Payments		(6,929)
Administrative Fees		(948)
Total Deductions	\$	(103,290)
<u>Total</u>		
Net Increase/(Decrease)	\$	70,809
Value of Assets at June 30, 2024	\$	1,315,719

¹ Includes \$8.7 million contribution from Section 115 Trust.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION III – ASSETS

Actuarial Value of Assets

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this System, the actuarial value has been calculated by first calculating the expected actuarial value of assets based on last year’s valuation interest rate, last year’s actuarial value of assets, and the net cash flow (contributions less benefit payments and assumed administrative expenses) of the System over the year prior to the valuation. One-third of the market value of assets less the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets.

Table III-3
Development of the Actuarial Value of Assets
*(**\$ in Thousands**)*

1. Actuarial Value of Assets at June 30, 2023	\$	1,293,562
Employer Contributions		42,319
Employee Contributions / Purchased Service		8,587
Benefit Payments		(102,342)
Assumed Administrative Expenses		(1,133)
Expected Return at 6.75%		86,970
2. Expected Value at June 30, 2024 (EV)	\$	1,327,963
3. Actual Market Value at June 30, 2024 (AV)	\$	1,315,719
4. One-Third of AV less EV	\$	(4,081)
5. Actuarial Value of Assets at June 30, 2024 [2. + 4.]	\$	1,323,882

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION III – ASSETS

Table III-4
Allocation of Actuarial Value of Assets as of June 30, 2024
(\$ in Thousands)

	General					Total
	Employees			Public Safety		
1. Actuarial Value of Assets at June 30, 2023	\$ 680,405			\$ 613,157		\$ 1,293,562
2. Contributions						
Employer Contributions	\$ 17,009			\$ 25,310		\$ 42,319
Employee Contributions / Purchased Service	<u>5,233</u>			<u>3,354</u>		<u>8,587</u>
Total Contributions	\$ 22,242			\$ 28,664		\$ 50,906
3. Benefit Payments ¹	\$ (55,690)			\$ (46,652)		\$ (102,342)
4. Assumed Administrative Expenses	\$ (715)			\$ (418)		\$ (1,133)
5. Investment Earnings, based on 6.43% return	\$ 43,533			\$ 39,356		\$ 82,889
6. Actuarial Value of Assets at June 30, 2024	\$ 689,775			\$ 634,107		\$ 1,323,882
7. Market Value of Assets at June 30, 2024 ²	\$ 685,523			\$ 630,196		\$ 1,315,719

¹ Projected Benefit Payments are allocated on the basis of FY 2024 expected payments.

² The allocation of Market Value of Assets is used only for comparison to the Present Value of Accrued Benefits.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION III – ASSETS

Investment Performance

The market value of assets (MVA) returned 9.95% during the fiscal year ending June 30, 2024, which is greater than the expected 6.75% return by 3.20%.

A return of 6.43% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only a portion of the gain or loss from the System's investment performance is recognized in a given year, the AVA can lag significantly behind the MVA in periods of very good performance. In a period of negative returns, the AVA does not decline as rapidly as the MVA.

Table III-5
Annual Rates of Return

Year Ending June 30	Market Value	Actuarial Value
2000	8.8%	11.9%
2001	(2.3%)	5.4%
2002	(7.6%)	(0.9%)
2003	5.4%	(2.5%)
2004	11.1%	9.5%
2005	6.7%	7.2%
2006	4.7%	6.2%
2007	15.1%	8.7%
2008	(5.2%)	4.9%
2009	(15.3%)	(2.1%)
2010	13.1%	(4.6%)
2011	20.2%	4.6%
2012	0.4%	11.2%
2013	11.8%	7.0%
2014	17.1%	10.5%
2015	1.2%	7.3%
2016	0.3%	5.0%
2017	11.4%	7.0%
2018	7.0%	7.1%
2019	5.1%	6.7%
2020	0.5%	4.7%
2021	25.9%	11.8%
2022	(9.7%)	3.7%
2023	8.6%	5.1%
2024	10.0%	6.4%

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION III – ASSETS

Table III-6
Projection of System's Benefit Payments and Contributions
*(**\$ in Thousands**)*

Fiscal Year Ending June 30	Expected Benefit Payments and Admin Expenses	Expected City Contributions	Expected Employee Contributions
2025	\$ 106,356	\$ 43,075	\$ 6,569
2026	108,592	43,187	5,957
2027	111,145	43,187	5,530
2028	115,287	43,187	5,153
2029	123,609	43,187	4,795
2030	125,402	43,187	4,478
2031	123,008	43,187	4,165
2032	124,466	43,187	3,833
2033	125,934	43,187	3,545
2034	126,659	43,187	3,267

Expected benefit payments are projected for the closed group valued at June 30, 2024. Expected City contributions are shown on a cash basis and include anticipated annual contributions of \$8.7 million from the Section 115 Trust. City contributions are assumed to be made on or around July 1 of each fiscal year in accordance with the pension funding policy stating that the City shall contribute the greater of the prior year's contribution – excluding additional contributions from the Section 115 Trust or otherwise – and the current year's actuarially determined contribution. Upon attaining fully funded status, City contributions are assumed to be based on the actuarially determined contribution as described in Section V of this report.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION IV – LIABILITIES

In this section, we present detailed information on System liabilities including:

- **Disclosure** of System liabilities at June 30, 2023 and June 30, 2024; and
- Statement of **changes** in these liabilities during the year.

Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Future Benefits:** Used for analyzing the financial outlook of the System, this represents the amount of money needed today to fund all future benefits and expenses of the System, assuming participants continue to accrue benefits.
- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the Present Value of Benefits above and subtracting the present value of future Employer Normal Costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.
- **Present Value of Accrued Benefits:** Used for communicating the current level of liabilities, this liability reflects the total amount of money needed today to fully fund the current accrued obligations of the System, assuming no future accruals of benefits, assets continue to earn 6.75% per year and no ad hoc COLAs are awarded. These liabilities are also used to assess whether the System can meet its current benefit commitments.

None of the liabilities disclosed in this report is appropriate for use in settling the liabilities of the System.

The tables on the next pages disclose each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of System assets yields, for each respective type, a **net surplus or unfunded liability**.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION IV – LIABILITIES

Table IV-1
Liabilities & Net (Surplus)/Unfunded
Combined
(*\$ in Thousands*)

	June 30, 2023	June 30, 2024
Present Value of Future Benefits		
Active Participant Benefits	\$ 516,614	\$ 516,013
Retiree Benefits	998,730	1,006,596
DROP Participants	48,359	60,431
Terminated Vested and Inactive Members	<u>87,637</u>	<u>85,778</u>
Present Value of Future Benefits (PVFB)	\$ 1,651,340	\$ 1,668,818
 City Normal Cost ¹	 \$ 10,284	 9,919
 Actuarial Liability		
Active Participant Benefits	\$ 396,028	\$ 402,038
Retiree Benefits	998,730	1,006,596
DROP Participants	48,359	60,431
Terminated Vested and Inactive Members ²	<u>87,637</u>	<u>85,778</u>
Actuarial Liability (AL)	\$ 1,530,754	\$ 1,554,843
Actuarial Value of Assets (AVA)	1,293,562	1,323,882
Net (Surplus)/Unfunded (AL – AVA)	\$ 237,192	\$ 230,961
 Present Value of Accrued Benefits		
Present Value of Accrued Benefits (PVAB)	\$ 1,433,359	\$ 1,457,796
Market Value of Assets (MVA)	<u>1,244,910</u>	<u>1,315,719</u>
Net (Surplus)/Unfunded (PVAB – MVA)	\$ 188,449	\$ 142,077

¹ Net of employee contributions

² The Actuarial Liability for participants due an account balance was \$62k and \$684k as of June 30, 2024 and June 30, 2023, respectively.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION IV – LIABILITIES

Table IV-2
Liabilities & Net (Surplus)/Unfunded
General Employees
(\$ in Thousands)

	June 30, 2023	June 30, 2024
Present Value of Future Benefits		
Active Participant Benefits	\$ 243,997	\$ 242,421
Retiree Benefits	510,353	510,655
DROP Participants	18,526	25,702
Terminated Vested and Inactive Members	<u>53,520</u>	<u>52,806</u>
Present Value of Future Benefits (PVFB)	\$ 826,396	\$ 831,584
 City Normal Cost ¹	 \$ 3,895	 3,687
 Actuarial Liability		
Active Participant Benefits	\$ 197,025	\$ 198,290
Retiree Benefits	510,353	510,655
DROP Participants	18,526	25,702
Terminated Vested and Inactive Members ²	<u>53,520</u>	<u>52,806</u>
Actuarial Liability (AL)	\$ 779,424	\$ 787,453
Actuarial Value of Assets (AVA)	680,405	689,775
Net (Surplus)/Unfunded (AL – AVA)	\$ 99,019	\$ 97,678
 Present Value of Accrued Benefits (PVAB)	 \$ 733,203	 \$ 740,783

¹ Net of employee contributions

² The Actuarial Liability for participants due an account balance was \$45k and \$543k as of June 30, 2024 and June 30, 2023, respectively.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION IV – LIABILITIES

Table IV-3
Liabilities & Net (Surplus)/Unfunded
Public Safety
(\$ in Thousands)

	June 30, 2023	June 30, 2024
Present Value of Future Benefits		
Active Participant Benefits	\$ 272,617	\$ 273,592
Retiree Benefits	488,377	495,941
DROP Participants	29,833	34,729
Terminated Vested and Inactive Members	34,117	32,972
Present Value of Future Benefits (PVFB)	\$ 824,944	\$ 837,234
 City Normal Cost ¹	 \$ 6,389	 6,232
 Actuarial Liability		
Active Participant Benefits	\$ 199,003	\$ 203,748
Retiree Benefits	488,377	495,941
DROP Participants	29,833	34,729
Terminated Vested and Inactive Members ²	34,117	32,972
Actuarial Liability (AL)	\$ 751,330	\$ 767,390
Actuarial Value of Assets (AVA)	613,157	634,107
Net (Surplus)/Unfunded (AL – AVA)	\$ 138,173	\$ 133,283
 Present Value of Accrued Benefits (PVAB)	 \$ 700,156	 \$ 717,013

¹ Net of employee contributions

² The Actuarial Liability for participants due an account balance was \$17k and \$141k as of June 30, 2024 and June 30, 2023, respectively.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION IV – LIABILITIES

Changes in Liabilities

Each of the liabilities disclosed in the prior tables is expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in System assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change that are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities since the last valuation.

Table IV-4
Changes in Liabilities
*(**\$ in Thousands**)*

	Actuarial Liability	Present Value of Accrued Benefits
Liabilities as of June 30, 2023	\$ 1,530,754	\$ 1,433,359
Liabilities as of June 30, 2024	\$ 1,554,843	\$ 1,457,796
Liability Increase/(Decrease)	\$ 24,089	\$ 24,437
Change Due to:		
Plan Amendments	\$ 0	\$ 0
Assumption and Method Change	0	0
Actuarial (Gain)/Loss	8,286	NC
Benefits Accumulated and Other Sources	15,803	24,437

NC = not calculated

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION IV – LIABILITIES

The table below provides additional insight into the main sources of gain or loss in the Actuarial Liability as of June 30, 2024. As mentioned earlier, the primary source of this year's liability loss was actual salaries exceeding those expected using the assumptions.

Table IV-5
Sources of Actuarial Liability (Gain) / Loss
(\$ in Thousands)

Source		(Gain) / Loss Amount	As a % of Actuarial Liability
Salary	\$	9,365	0.61%
Mortality		(786)	(0.05%)
Benefit Payments		(721)	(0.05%)
Other		428	0.03%
Total Actuarial Liability (Gain) / Loss	\$	8,286	0.54%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the System. Typically, the actuarial process will use an actuarial funding method that will result in a pattern of contributions that are both stable and predictable.

For this System, the actuarial funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three components to the total Actuarially Determined Contribution (ADC): the **normal cost**, the **unfunded actuarial liability amortization**, and the **expected administrative expenses**.

The normal cost is determined by taking the portion of current year earnings attributable to the value, as of entry age into the System, of each member's projected future benefits divided by the value, also at entry age, of the member's expected future salary. Since the City contributes the Actuarially Determined Contribution one year later, the expected normal cost amount for the fiscal year in which the City contributes is used when determining the ADC.

The second part is an amortization payment to pay off the unfunded actuarial liability (UAL). The unfunded actuarial liability is the difference between the actuarial assets of the System at the valuation date and the assets the System should hold as determined by the actuarial cost method. The UAL is adjusted for one year, by increasing it at the assumed interest rate and reducing it by the portion of the City's scheduled contribution not attributable to the value of additional benefits earned (i.e., normal cost) or administrative expenses. The resulting projected UAL is then amortized over a 20-year period. The initial UAL established concurrent with the June 30, 2017 valuation is being amortized over a closed 20-year period. Subsequent changes to the UAL due to plan changes, assumption changes, gains, and losses, including those established as a result of this valuation, will be amortized over their own closed 20-year period. All amounts are developed using a level-dollar amortization method. Please see Table V-3 for details.

The third piece of the contribution amount accounts for anticipated administrative expenses in the fiscal year in which the City actually makes the contribution. Expenses were first incorporated with the June 30, 2019 valuation to better align with new accounting standards under GASB No. 67 and 68. Effective June 30, 2023, the administrative expense assumption is now reflected as a dollar amount as opposed to a rate to better align with a similar change in the actuarially determined contribution. Administrative expenses are assumed to be \$1.1 million for the fiscal year ending June 30, 2025, increasing with 3% inflation annually thereafter.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

SECTION V – CONTRIBUTIONS

Actuarially Determined Contribution

The table below shows the development of the actuarially determined contribution (ADC) for fiscal year ending 2026. The funding policy contribution must be no less than the prior fiscal year's contribution. All amounts shown below exclude Section 115 Trust contributions that were made or are expected to be made as well as any additional one-time City contributions.

Table V-1 Actuarially Determined Contribution for Fiscal Year 2026 <i>(\$ in Thousands)</i>				
	General	Public Safety	Total	
City Normal Cost ¹	\$ 3,184	\$ 6,293	\$ 9,477	
Unfunded Actuarial Liability Amortization	10,195	13,682	23,877	
Expected Administrative Expenses ¹	<u>706</u>	<u>427</u>	<u>1,133</u>	
Actuarial Determined Contribution (ADC)	\$ 14,085	\$ 20,402	\$ 34,487	
City Contribution during Fiscal Year 2025 (excluding Section 115 Trust contribution)			\$ 34,375	
Funding Policy Contribution (greater of ADC, Fiscal Year 2025 contribution)			\$ 34,487	

¹ *Normal Cost and Administrative Expenses are projected to July 1, 2025 to align with City contribution timing.*

The ADC in Table V-1 above is a reasonable actuarially determined contribution in accordance with Actuarial Standard of Practice (ASOP) No. 4. The actuarial methods have been selected to balance benefit security, intergenerational equity, and contributions stability. The selection of the actuarial methods has considered the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due. The actuarial methods and assumptions are shown in Appendix B of this report.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION V – CONTRIBUTIONS

Table V – 2
Development of UAL Amortization Layer for FYE 2026
(\$ in Thousands)

	General	Public Safety	Total
a. June 30, 2024 Unfunded Actuarial Liability (UAL)	\$ 97,678	\$ 133,283	\$ 230,961
b. Expected City Contribution on July 1, 2024 ¹	\$ 17,376	\$ 25,699	\$ 43,075
c. City Normal Cost and Expenses	(4,373)	(6,646)	(11,019)
d. Interest on b. and c. to June 30, 2025	980	1,498	2,478
e. Net Contribution to apply to UAL	\$ 13,983	\$ 20,551	\$ 34,534
f. Interest on UAL to June 30, 2025	\$ 6,592	\$ 8,997	\$ 15,589
g. June 30, 2025 Expected Unfunded Actuarial Liability (a. – e. + f.)	\$ 90,287	\$ 121,729	\$ 212,016
h. Outstanding Balances for Amortization Bases as of June 30, 2025	\$ 87,007	\$ 120,934	\$ 207,941
i. June 30, 2025 Experience UAL Layer [g. – h.]	\$ 3,280	\$ 795	\$ 4,075
j. FYE 2026 Amortization Payment ²	\$ 284	\$ 69	\$ 353

¹ Includes \$8.7 million contribution from the Section 115 Trust.

² Since contributions are payable a year after they are developed, the UAL is amortized over 20 years on July 1, 2025.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

SECTION V – CONTRIBUTIONS

Table V-3
Schedule of Amortization Bases

Type of Base	Date Established	June 30, 2024 Initial Amount	FYE 2025 Amortization Payment	June 30, 2025 Outstanding Balance	Remaining Amortization Years	FYE 2026 Amortization Payment
GENERAL EMPLOYEES						
1. 2017 Initial Unfunded Base	7/1/2017	\$ 115,794	\$ 12,218	\$ 110,567	13	\$ 12,218
2. 2018 Plan Change	7/1/2018	6,375	645	6,116	14	645
3. 2018 Experience Base	7/1/2018	(4,724)	(478)	(4,533)	14	(478)
4. 2019 Experience Base	7/1/2019	836	82	806	15	82
5. 2020 Experience Base	7/1/2020	11,820	1,115	11,428	16	1,115
6. 2021 Experience Base	7/1/2021	(91,969)	(8,411)	(89,198)	17	(8,411)
7. 2022 Assumption Change	7/1/2022	32,595	2,899	31,700	18	2,899
8. 2022 Plan Change	7/1/2022	(892)	(79)	(868)	18	(79)
9. 2022 Experience Base	7/1/2022	21,933	1,950	21,331	18	1,950
10. 2023 Plan Change	7/1/2023	(2,810)	(244)	(2,739)	19	(244)
11. 2023 Experience Base	7/1/2023	2,457	213	2,397	19	213
12. 2024 Experience Base	7/1/2024	N/A	N/A	3,280	20	284
General Employees Total		\$ 91,415	\$ 9,910	\$ 90,287		\$ 10,194
PUBLIC SAFETY						
1. 2017 Initial Unfunded Base	7/1/2017	\$ 146,561	\$ 15,464	\$ 139,946	13	\$ 15,464
2. 2018 Plan Change	7/1/2018	5,082	514	4,876	14	514
3. 2018 Experience Base	7/1/2018	2,902	294	2,785	14	294
4. 2019 Experience Base	7/1/2019	(2,658)	(259)	(2,561)	15	(259)
5. 2020 Experience Base	7/1/2020	10,284	970	9,943	16	970
6. 2021 Experience Base	7/1/2021	(95,075)	(8,695)	(92,211)	17	(8,695)
7. 2022 Assumption Change	7/1/2022	47,761	4,248	46,450	18	4,248
8. 2022 Plan Change	7/1/2022	(24)	(2)	(23)	18	(2)
9. 2022 Experience Base	7/1/2022	14,747	1,312	14,342	18	1,312
10. 2023 Plan Change	7/1/2023	(3,499)	(303)	(3,412)	19	(303)
11. 2023 Experience Base	7/1/2023	821	71	799	19	71
12. 2024 Experience Base	7/1/2024	N/A	N/A	795	20	69
Public Safety Total		\$ 126,902	\$ 13,614	\$ 121,729		\$ 13,683
Combined Total				\$ 212,016		\$ 23,877

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1
Summary of Active Membership as of June 30, 2024 ¹

Plan	Count	Average Age	Average Service	Average Salary
General	1,238	52.0	14.0	\$ 66,174
Public Safety	653	43.5	15.6	75,738
Total System	1,891	49.1	14.5	69,477

¹ Excludes those on Leave of Absence

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX A – MEMBERSHIP INFORMATION

Table A-2
Summary of Inactive Membership as of June 30, 2024
(\$ in Thousands)

	Count	Annual Benefit		Average Annual Benefit
Service Retirements				
General	2,500	\$ 47,794	\$	19.1
Public Safety	<u>1,078</u>	<u>39,274</u>		36.4
Total	3,578	\$ 87,068		24.3
DROP Participants¹				
General	77	\$ 1,704	\$	22.1
Public Safety	<u>51</u>	<u>1,946</u>		38.2
Total	128	\$ 3,650		28.5
Contingent Annuitants				
General	381	\$ 3,862	\$	10.1
Public Safety	<u>248</u>	<u>3,835</u>		15.5
Total	629	\$ 7,697		12.2
Disableds				
General	162	\$ 2,527	\$	15.6
Public Safety	<u>133</u>	<u>3,780</u>		28.4
Total	295	\$ 6,308		21.4
Vested Former Members²				
General	1,157	\$ 9,057	\$	7.8
Public Safety	<u>415</u>	<u>6,575</u>		15.8
Total	1,572	\$ 15,632		9.9

¹ For those in the DROP period, the amount shown is 70% of the full monthly benefit.

² Benefits are assumed payable at Normal Retirement Age. Includes 10 participants on leave of absence that are currently vested.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3 Data Reconciliation¹							
	Vested						
	Actives	Former Members²	Service Retirements	DROP Participants	Contingent Annuitants	Disableds	Total
Count as of June 30, 2023	2,121	1,596	3,494	108	617	305	8,241
Additions							
Return from Leave of Absence	4	0	0	0	0	0	4
New Beneficiaries & QDROs	0	0	0	0	6	0	6
Data Corrections	0	0	1	0	0	0	1
Removals							
Non-Vested Terminations	(44)	0	0	0	0	0	(44)
Death without Beneficiary	(3)	0	(60)	0	(43)	(9)	(115)
Data Corrections	0	0	0	0	0	0	0
Status Transitions							
Return to Work	3	(3)	0	0	0	0	0
Vested Terminations	(76)	76	0	0	0	0	0
DROP Entrants	(38)	0	0	38	0	0	0
Retirements	(71)	(94)	183	(18)	0	0	0
Disablements	(3)	(3)	0	0	0	6	0
Death with Beneficiary	(2)	0	(40)	0	49	(7)	0
Count as of June 30, 2024	1,891	1,572	3,578	128	629	295	8,093

¹ Reconciliation excludes participants due an account balance and non-vested participants on Leave of Absence.

² 13 and 10 participants on Leave of Absence as of June 30, 2023 and June 30, 2024, respectively, are entitled to a vested benefit and thus included as Vested Former Members.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX A – MEMBERSHIP INFORMATION

Table A-4
Distribution of Active Participants - General Employees
*(**\$ in Thousands**)*

Age	Counts by Age/Service										Total
	Service										
Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	0	1	0	0	0	0	0	0	0	0	1
25 to 29	0	6	8	0	0	0	0	0	0	0	14
30 to 34	0	18	36	8	0	0	0	0	0	0	62
35 to 39	0	16	63	26	15	0	0	0	0	0	120
40 to 44	0	17	58	37	28	9	0	0	0	0	149
45 to 49	0	16	47	29	30	25	9	0	0	0	156
50 to 54	0	20	38	33	31	47	24	8	0	0	201
55 to 59	0	15	47	44	32	46	29	12	5	0	230
60 to 64	0	17	40	24	36	23	21	8	9	2	180
65 to 69	0	8	10	20	18	13	11	2	3	4	89
70 & up	0	3	5	7	6	2	2	0	5	6	36
Total	0	137	352	228	196	165	96	30	22	12	1,238

Age	Total Salary by Age/Service										Total
	Service										
Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	\$ 0	\$ 40	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 40
25 to 29	0	284	423	0	0	0	0	0	0	0	707
30 to 34	0	866	1,948	397	0	0	0	0	0	0	3,211
35 to 39	0	828	3,905	1,547	836	0	0	0	0	0	7,116
40 to 44	0	950	3,547	2,584	1,998	520	0	0	0	0	9,599
45 to 49	0	822	2,875	2,107	2,063	1,548	660	0	0	0	10,076
50 to 54	0	1,001	2,298	2,639	2,299	3,310	1,867	708	0	0	14,122
55 to 59	0	822	3,525	2,500	2,099	2,753	2,035	974	354	0	15,062
60 to 64	0	1,486	2,577	1,845	2,371	1,467	1,489	607	667	118	12,625
65 to 69	0	567	777	1,397	1,258	895	635	153	301	402	6,386
70 & up	0	195	658	646	360	100	88	0	347	587	2,979
Total	\$ 0	\$ 7,861	\$ 22,532	\$ 15,661	\$ 13,285	\$ 10,593	\$ 6,773	\$ 2,442	\$ 1,669	\$ 1,107	\$ 81,923

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX A – MEMBERSHIP INFORMATION

Table A-5
Distribution of Active Participants - Public Safety
*(**\$ in Thousands**)*

COUNTS BY AGE/SERVICE

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	0	6	0	0	0	0	0	0	0	0	6
25 to 29	0	16	23	2	0	0	0	0	0	0	41
30 to 34	0	11	38	28	0	0	0	0	0	0	77
35 to 39	0	6	15	60	32	1	0	0	0	0	114
40 to 44	0	1	11	22	66	28	0	0	0	0	128
45 to 49	0	1	4	13	37	54	13	0	0	0	122
50 to 54	0	1	2	7	26	43	18	3	0	0	100
55 to 59	0	0	3	5	13	17	15	4	2	0	59
60 to 64	0	0	0	0	0	4	1	1	0	0	6
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	0	42	96	137	174	147	47	8	2	0	653

TOTAL SALARY BY AGE/SERVICE

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	\$ 0	\$ 335	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 335
25 to 29	0	888	1,328	132	0	0	0	0	0	0	2,348
30 to 34	0	570	2,327	1,976	0	0	0	0	0	0	4,873
35 to 39	0	318	889	4,286	2,500	89	0	0	0	0	8,082
40 to 44	0	52	672	1,565	5,388	2,326	0	0	0	0	10,002
45 to 49	0	58	236	864	2,852	4,803	1,164	0	0	0	9,979
50 to 54	0	59	76	482	2,046	3,879	1,662	326	0	0	8,530
55 to 59	0	0	103	296	956	1,401	1,421	399	175	0	4,751
60 to 64	0	0	0	0	0	350	90	117	0	0	557
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	\$ 0	\$ 2,279	\$ 5,631	\$ 9,602	\$ 13,742	\$ 12,849	\$ 4,338	\$ 842	\$ 175	\$ 0	\$ 49,457

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

Interest Rate

6.75% per annum, compounded annually (originally adopted as of June 30, 2022).

An effective interest rate of 5.31% was used when calculating the LDROM to meet the new requirements under Actuarial Standard of Practice No. 4. This was based on the FTSE Pension Discount Curve published as of June 30, 2024.

Mortality

Pre-Retirement

General: Pub-2010(B) General Employee Below-Median Table with fully generational improvements using Scale MP-2021, with 5% of deaths assumed accidental

Public Safety: Pub-2010 Safety Employee Table with fully generational improvements using Scale MP-2021, with 60% of deaths assumed accidental

Healthy Annuitant

General: Pub-2010(B) General Healthy Annuitant Below-Median Table with fully generational improvements using Scale MP-2021

Public Safety: Pub-2010 Safety Healthy Annuitant Table with fully generational improvements using Scale MP-2021

Disabled

General: Pub-2010 General Disabled Annuitant Table with fully generational improvements using Scale MP-2021

Public Safety: Pub-2010 Safety Disabled Annuitant Table with fully generational improvements using Scale MP-2021

Salary Increase

Annual rates of salary increases are as follows:

Service	General	Public Safety
0	6.09 %	9.18 %
1	5.94	5.58
2	5.78	5.32
3	5.63	5.32
4	5.47	5.32
5	5.32	5.32
10	4.55	5.32
15	4.03	5.32
20	4.03	4.65
25	4.03	4.03
30	3.71	4.03

The table above includes an annual inflation rate of 3.00%.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Withdrawal

Service	General	Public Safety
0	23.00 %	12.50 %
1	20.00	12.00
2	18.00	11.00
3	16.00	10.00
4	15.00	9.00
5	14.00	8.00
10	8.00	3.00
15	3.00	1.00
20	3.00	1.00
25	3.00	1.00

Disability

Age	General*		Public Safety**
	Male	Female	Unisex
20	0.02%	0.02%	0.02%
25	0.03	0.02	0.02
30	0.03	0.02	0.04
35	0.05	0.03	0.05
40	0.06	0.05	0.09
45	0.09	0.07	0.18
50	0.16	0.12	0.30
54	0.21	0.16	0.41
55	0.25	0.19	0.43
59	0.37	0.28	0.57

**25% of General disabilities are assumed to be accidental*

***70% of Public Safety disabilities are assumed to be accidental*

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Retirement

General

Age	<i>Hired On or After July 1, 2018</i>			
	Hired Before 7/1/2018	Social Security NRA 65	Social Security NRA 66	Social Security NRA 67
50	10.00 %	10.00 %	10.00 %	10.00 %
51	10.00	10.00	10.00	10.00
52	10.00	10.00	10.00	10.00
53	10.00	10.00	10.00	10.00
54	10.00	10.00	10.00	10.00
55	10.00	10.00	10.00	10.00
56	10.00	10.00	10.00	10.00
57	10.00	10.00	10.00	10.00
58	10.00	10.00	10.00	10.00
59	10.00	10.00	10.00	10.00
60	22.50	12.50	12.50	12.50
61	22.50	12.50	12.50	12.50
62	30.00	12.50	12.50	12.50
63	22.50	12.50	12.50	12.50
64	25.00	15.00	15.00	15.00
65	35.00	35.00	15.00	15.00
66	35.00	35.00	35.00	15.00
67	35.00	35.00	35.00	35.00
68	25.00	25.00	25.00	25.00
69	25.00	25.00	25.00	25.00
70	100.00	100.00	100.00	100.00

For those hired before July 1, 2018, the retirement rates at ages before 60 are 10% higher than those shown above if the participant has at least 30 years of service. For those hired on or after July 1, 2018, the retirement rate is 10% higher than shown above at ages before Social Security Normal Retirement Age (SSNRA) if the participant is eligible for an unreduced benefit under the “Rule of 90.”

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Public Safety

Service	Rate of Retirement*
20	5.00%
21	7.50
22	7.50
23	10.00
24	30.00
25	30.00
26	30.00
27 and up	20.00

** In lieu of the rates above, any active participant at least age 65 is assumed to retire immediately.*

Terminated Vested Retirement Age

Terminated vested participants are assumed to retire at the later of their normal retirement date and the valuation date.

Future Expenses

Administrative expenses are assumed to be \$1,100,000 payable at the beginning of the year, increasing 3% annually. The assumed interest rate is net of anticipated investment expenses.

Loading or Contingency Reserves

A load of 1.00% for General Employees and 1.15% for Public Safety is applied to retirement benefits for active employees to account for unused sick leave balances at retirement.

Marital Status

For active members, 65% of Public Safety and 55% of General Employees are assumed to be married, with males three years older than females.

For inactive participants, those with “unknown” marital status were updated to use data from the prior year.

Form of Payment Election

For retirees with a specified optional form of payment, the raw data was used. For all other retirees and beneficiaries, the form of payment is determined by marital status. Those with a marital status of “married” are assumed to receive their benefit as a 50% Joint & Survivor, and all unmarried participants are assumed to receive a Single Life Annuity.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

DROP Election

70% of members that have reached the maximum pensionable service (26 years for Public Safety, 35 years for General) and 30% of members with less than the maximum pensionable service are assumed to elect to enter DROP in lieu of immediate retirement.

Rationale for Economic and Demographic Assumptions

Assumptions were set by the Board of Trustees on the basis of recommendations made by Cheiron as a result of an experience study covering the period from July 1, 2016 through June 30, 2021.

The combined effect of the assumptions in aggregate is expected to have no significant bias.

Changes in Assumptions

None.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

Actuarial Cost Method

Entry Age Normal Cost Method. The unfunded actuarial liability (UAL) as of June 30, 2017, is being amortized over a closed 20-year period. Subsequent annual changes in the UAL are amortized over their own closed 20-year periods calculated as follows: The UAL is adjusted for one year, by increasing it at the assumed interest rate and reducing it by the portion of the City's scheduled contribution not attributable to the value of additional benefits earned (i.e., normal cost) or administrative expenses. The resulting projected UAL is then amortized over a 20-year period using a level-dollar amortization.

City contributions are assumed to occur on the July 1 following the valuation date to be made on the basis of the amounts developed in this valuation.

In accordance with the pension funding policy, City contributions in the first year after the issuance of pension obligation bonds (POB) will be based on the actuarially determined contribution. With the most recent POB issuance on June 29, 2021, the July 1, 2022 contribution amount was set through the actuarial process. For all subsequent fiscal years, City contributions cannot be less than the preceding year until the System reaches 100% funding. In this determination, no consideration is given for Section 115 Trust contributions or any additional one-time City contributions from the prior fiscal year. Other conditions that would provide consideration to adjust the contribution amount would be if the total contribution exceeds a 6% increase from the preceding year or if the total contribution exceeds \$80 million.

Asset Valuation Method

The actuarial value of assets is determined by first calculating the expected actuarial value of assets based on last year's valuation interest rate, last year's actuarial value of assets, and the net cash flow (contributions less benefit payments and assumed administrative expenses) of the System over the year prior to the valuation. One-third of the market value of assets less the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets.

Valuation Software

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this actuarial valuation.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Projection Software

Projected expected results of future valuations in this valuation were developed using P-Scan, our proprietary tool for the intended purpose of developing projections. As part of the review process for this valuation, we have performed several tests to verify that the results are reasonable and appropriate. We are not aware of any material inconsistencies, unreasonable output resulting from the aggregation of assumptions, material limitations, or known weaknesses that would affect this valuation, and the projections contained within.

Changes in Actuarial Methods

None.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

The following is intended to summarize the key benefits valued in this valuation. Members of the System and other parties should not rely on this summary as a substitute for or interpretation of the laws and ordinances of the Norfolk City Code covering this retirement plan.

1. Membership

Any permanent regular full-time employee entering the service of the City of Norfolk prior to January 1, 2022 was required to become a member of the Retirement System. Upon entering the System, members are classified according to their occupational group, either as General Employees, Firefighters, Police Officers, or Paramedics. Paramedics, formerly members of General Employees, were reclassified as members of Public Safety effective June 9, 1992. City Council members on or after July 1, 2001, are classified as members of Public Safety.

For each full calendar year beginning January 1, 1997 through December 31, 2021, any permanent part-time employees shall be members of and entitled to benefits in proportion to which their annual hours bear to those of full-time employees.

A member, who was a Norfolk Community Services Board employee on June 30, 2012, who became a City employee on July 1, 2012, began participating in this retirement plan on such date. Prior service for these employees was credited towards benefit eligibility only. Lastly, these employees were exempt from the member's mandatory contributions applicable to anyone hired on or after October 5, 2010 until January 8, 2015.

Effective January 1, 2022, the Retirement System is closed to new members. Between January 1, 2022 and December 31, 2022, participants of the Retirement System were permitted to port their service to the Virginia Retirement System.

2. Normal Service Retirement Allowance

Eligibility

Employees Hired Before July 1, 2018

For General Employees, the earlier of age 60 or 30 years of creditable service.

For Firefighters, Police Officers, and Paramedics, the earlier of age 55 or 25 years of creditable service. Mandatory retirement is age 65 for Firefighters and Police Officers.

Employees Hired On or After July 1, 2018

For General Employees, the earlier of the retirement age as defined under the Social Security Act (42 U.S.C §416) or the age at which the combination of a participant's age and service sums to at least 90.

For Firefighters, Police Officers, and Paramedics, the earlier of age 60 or age 50 with 25 years of creditable service. Mandatory retirement is age 65 for Firefighters and Police Officers.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Amount

Employees Hired Before July 1, 1980

For General Employees, the pension earned is 2% of average final compensation for each year of creditable service.

Effective January 1, 1997 for General Employees, the maximum number of years of creditable service is the greater of 35 years or the number of years of service as of December 31, 1996.

For Firefighters, Police Officers, and Paramedics, the pension earned is 2.5% of average final compensation for each year of creditable service up to a maximum of 65% of average final compensation.

Employees Hired Between July 1, 1980 and June 30, 2018

For General Employees, the pension earned is 1.75% of average final compensation for each year of creditable service up to a maximum of 35 years.

For Firefighters, Police Officers, and Paramedics, the pension earned is 2.5% of average final compensation for each year of creditable service up to a maximum of 65% of average final compensation.

“Average Final Compensation” means the average annual earnable compensation for the three years of creditable service which produces the highest average. Creditable service consists of membership service plus 100% of accumulated unused sick leave for all employees except Firefighters. For Firefighters, 46% of unused sick leave accumulated prior to July 1, 1985 and 100% of unused sick leave accumulated on and after July 1, 1985 is included.

Employees Hired On or After July 1, 2018

For General Employees, the pension earned is 1.75% of average final compensation for each year of creditable service up to a maximum of 35 years.

For Firefighters, Police Officers, and Paramedics, the pension earned is 2.5% of average final compensation for each year of creditable service up to a maximum of 65% of average final compensation.

“Average Final Compensation” means the average annual earnable compensation for the five years of creditable service which produces the highest average. Creditable service consists of membership service plus 100% of accumulated unused sick leave for all employees except Firefighters. For Firefighters, 46% of unused sick leave accumulated prior to July 1, 1985 and 100% of unused sick leave accumulated on and after July 1, 1985 is included.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

3. Early Service Retirement Allowance

Eligibility

Within five years of eligibility for normal service retirement.

Amount

Accrued service retirement allowance deferred to normal service retirement age. A member may elect to receive an immediate benefit equal to the accrued service retirement allowance reduced by $\frac{1}{4}$ of 1% for each month commencement date precedes the normal retirement date for General Employees, and $\frac{1}{2}$ of 1% for each month commencement date precedes the normal retirement date for firefighters, police officers, and paramedics.

4. Vested Allowance

Eligibility

Five years of creditable service.

Amount

Accrued service retirement allowance deferred to normal retirement age. If not eligible for retirement, a member may elect to leave their contributions made prior to July 1, 1972 with interest, if any, in the System until normal service retirement date.

5. Ordinary Disability Retirement Allowance

Eligibility

Five years of creditable service and total and permanent disability not due to an accident in the performance of duty.

Amount

Accrued service retirement allowance with a minimum of 25% of average final compensation. The minimum cannot exceed the normal service retirement allowance based on average final compensation and creditable service projected to normal service retirement date.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

6. Accidental Disability Retirement Allowance

Eligibility

Total and permanent disability as a result of an accident in the performance of duty, regardless of length of service. Applications must be filed within six years from the date of accident.

The disability of a firefighter, police officer, sheriff, or deputy sheriff caused by hypertension, heart disease, or respiratory disease is presumed to have been suffered in the line of duty unless the contrary is shown by medical evidence.

Amount

The amount payable is 66½% of average final compensation.

7. Ordinary Death Benefit

Eligibility

Death in active service due to causes not the result of an accident in the performance of duty. Benefits are paid to a designated beneficiary or estate.

Amount

If the deceased member was not vested, mandatory contributions made after October 5, 2010, prior to vesting, together with such interest, if any, made by the member with not less than one-half of the interest credited are paid to the nominated beneficiary, otherwise the estate. Any employee who becomes a member of the system on or after July 1, 1979 that attained five (5) or more years of creditable service in the system a lump-sum benefit equal to 50% of their earnable compensation during the year immediately preceding their death is payable to the nominated beneficiary. If a member dies in service on or after July 1, 1974 and the member was eligible for early or normal service retirement, and if the person nominated was their spouse, the spouse may elect to receive, in lieu of a lump sum benefit, a monthly benefit is equal to one-half of the retirement allowance that would have been payable to the member had the member retired and immediately commenced payment. If the spouse dies or remarries before the youngest unmarried child attains age 18, the pension shall continue to the unmarried children to the date that all the children have died, married, or attained age 18, whichever occurs first. If the spouse was receiving benefits on or before June 30, 1978, payments shall continue after remarriage with no further payments after death.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

8. Accidental Death Benefit

Eligibility

Death in active service resulting from an accident in the performance of duty within six years from the date of the accident. The death of a firefighter, police officer, sheriff, or deputy sheriff caused by hypertension, heart disease, or respiratory disease in the case of firefighters is presumed to have been suffered in the line of duty unless the contrary is shown by medical evidence.

Amount

If the deceased member was not vested, mandatory contributions made after October 5, 2010, prior to vesting, together with such interest, if any, made by the member with not less than one-half of the interest credited are paid to nominated beneficiary, otherwise the estate. A pension, one-half of the average final compensation, is payable to the spouse until death or remarriage. If there is no spouse or if the spouse dies or remarries, the benefit is payable to children under age 18 or if there are no children under the age of 18, then the member's living parents.

Offset on Account of Workers' Compensation

All benefits paid under the provisions of any workers' compensation act or any similar law to any member or beneficiary, or to the dependents of any member or beneficiary on account of any disability or death are in such manner as the Board determines, offset against any benefits provided from City contributions to the Employees' Retirement System.

9. Death Benefit After Retirement

Eligibility

Death of a retiree who became a member between July 1, 1979 and June 30, 2016, completed five years of creditable service, and was receiving retirement allowance payments; or of a spouse receiving an accidental death benefit.

Amount

Lump sum death benefit. Lump sum equal to one-half of the average final compensation on which the retirement allowance of the deceased retired member or spouse was based. The lump sum is payable to the surviving spouse, to unmarried children under age 18, or unmarried children over age 18 who are physically or mentally unable to make a living based on the form of payment elected by the member at retirement.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Survivor continuance. Designated beneficiaries may also be eligible for a full or partial continuance of the member's monthly retirement allowance. The following table details the optional forms of payment available to members at retirement, specifies their corresponding continuance amounts, and indicates the options that are entitled to the lump sum death benefit described above. Reductions to the member benefit for the optional forms of payment are made on an actuarial equivalent basis.

Option	Survivor Continuance	Lump Sum Death Benefit
No Option	For persons who became members before July 1, 2016 who have not made an optional allowance election, an unreduced pension with the provision that at death, 50% of the unreduced pension will be continued through the life of the surviving spouse; or, if there is no surviving spouse, then to a surviving unmarried child or children under age eighteen (18) at the date of death, or to a surviving unmarried child or children over age eighteen (18), if the medical board shall certify that such unmarried child or children are physically or mentally unable to make a living.	Eligible for members hired before July 1, 2016; at election of the survivor, the lump sum death benefit would be payable in lieu of the Survivor Continuance
	For members hired on or after July 1, 2016, an unreduced pension is payable for the life of the member.	
	This benefit would payable in lieu of the lump sum death benefit.	
Option A	For members hired before July 1, 2016, A reduced pension with the provision that at death, 100% of the reduced pension will be continued throughout the life of the designated beneficiary.	Eligible
Option B	For members hired before July 1, 2016, A reduced pension with the provision that at death, 50% of the reduced pension will be continued throughout the life of the designated beneficiary.	Eligible
Option C	For members hired before July 1, 2016, a reduced pension with the provision that at death some other benefit approved by the Board of Trustees will be payable.	Eligible
Option D	A reduced pension with the provision that at death, 50% of the reduced pension will be continued throughout the life of the designated beneficiary. Upon divorce or death of the designated beneficiary, members are permitted to file only one (1) petition to name an alternative beneficiary under limited circumstances.	Ineligible

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2024**

APPENDIX C – SUMMARY OF PLAN PROVISIONS

10. Return of Contributions

Eligibility

Termination of non-vested membership prior to death.

Amount

If not eligible for a retirement allowance, all contributions with interest credited.

11. Contributions

By Members	5% of earnable compensation for anyone hired on or after October 5, 2010. Effective January 8, 2015, all members (except City Council members hired before October 5, 2010) will be required to contribute 5% of earnable compensation.
By City	Annual contributions actuarially computed to be required to cover the cost of benefits of the System.

12. Deferred Retirement Option Program (DROP)

Eligibility

Any active member of the System who reaches Normal Retirement age may elect to participate.

Amount

The DROP period may be elected by the member but shall not exceed the earlier of five years or mandatory retirement age for Public Safety officers. During the DROP period, 70% of the participant's monthly retirement allowance shall be paid to the DROP account. No interest shall accrue on this account during the DROP period. At the end of the DROP period, the participant will receive a lump sum payment of the DROP account and shall begin receiving his or her full monthly benefit payment as a retired member.

13. Changes in Plan Provisions

None.